A Clinical Lecture
ON
HYPERNEPHROMA.

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GENTLEMEN,—The increased attention which is now being directed, on account of the revival of the controversy as to their origin, to the class of renal tumours known as hypernephromata has led me to take a case of such a tumour of the kidney recently under my care as a text for this afternoon's lecture. I shall divide what I have to say into two chief parts. In the first I shall give a very brief summary of the case I have just mentioned, then deal shortly with the naked-eye anatomy of these tumours as exemplified characteristically in the specimen from this case, and finally with the clinical features of the disease, which are for the most part obvious corollaries of the morbid anatomy. In the second part I shall describe the chief microscopic characters of these tumours, showing you on the screen the structure of the specimen in this case and then shortly discuss the hypotheses of the pathogenesis of hypernephromata.

PART I.

Clinical history of case.—The patient, a man, aged 54 years, was admitted under the care of Dr. F. J. Poynton, who kindly transferred the case to me. There was a history of pain in the left side of the abdomen coming on especially after heavy meals and lasting for about one and a half hours. The patient had been subject to this pain for about five months. For about a month longer he had noticed occasional attacks of stabbing pain over the region of the heart. The attacks lasted for from five to ten minutes. There had been no urinary symptoms except the occasional passage of large quantities of urine. The man was thin and unhealthy-looking; although the blood examination showed no striking change the appearance of the skin and mucous membranes suggested a pronounced anæmia. A tumour was present in the left loin. It was of about the size of a cocoanut, roughly globular in shape, fairly uniform in outline, and elastic in consistence. It filled the loin from behind and was resonant in front. The tumour was distinctly tender. The temperature rose every evening to about 100° F. The urine was normal. The case was regarded as one of pyonephrosis or tumour. On Dec. 28th I explored the swelling through a lumbar incision, found it to be a tumour, and removed it with the kidney from which it grew. The patient recovered rapidly, the large wound healed by first intention, and at the time of discharge, three weeks later, the general health was much improved and there was no pain or other evidence of disease. The tumour, which was of about the size of a cocoanut, proved to be a hypernephroma. The specimen shows the characteristic naked-eye features of these growths.

We may now enter upon some general account of the hypernephromata. The classification of the tumours of the kidney has always been one of the most difficult and thankless tasks of the morbid histologist. The possible varieties of structure have seemed almost too many even to be enumerated and too varied to be generalised. For a long time the histology of these tumours consisted of a number of descriptions by individual authors forming a mass of observations largely irreconcilable with one another and resistive of classification. About 24 years ago, however, a considerable step in advance was made in the classical work of Grawitz, who showed that a large number of the most widely different histological pictures were different aspects of one and the same tumour. He showed that it is a characteristic of this tumour to display in different parts structures of the most different kinds, but that through all its varieties a thread of similarity runs which renders the recognition of it at all times easy and certain. He went further, however, and produced a considerable amount of evidence to show that these tumours might be correlated with the well-known existence in the kidney of small islets of tissue identical in structure with the suprarenal body, and sought in fact to demonstrate that the tumour originated in these ectopic masses of suprarenal tissue. His contention was generally accepted and has remained until quite recently uncontested, so that the tumour to-day goes by the name of Grawitz's tumour or, more widely, hypernephroma. We shall mention later some of the chief arguments used by Grawitz to support the hypothesis of the suprarenal origin of these tumours.

For a considerable time it was supposed that the hypernephroma was a comparatively rare tumour. The increase of experience which has come with the rapid diminution in the mortality of nephrectomy has, however, shown that this opinion was not justified. The various series of cases of malignant disease of the kidney which are published from time to time have shown an increasing proportion of hypernephromata to the whole; this may be ascribed to increasing familiarity with the microscopical and macroscopical characters of the tumour, and the recognition of the fact that there are no tumours which vary in structure so much from part to part as do kidney tumours, and that therefore no kidney tumour can be regarded as adequately investigated until sections from many different parts of it have been examined. The increase in the cases classified as hypernephromata has occurred for the most part at the expense of those formerly described as carcinoma. Anyone at all familiar with the histology of the tumour can well understand how many hypernephromata may have been mistaken for carcinomata, for an isolated section may show a striking resemblance to a typical alveolar carcinoma. That this mistake has probably been common is well shown in an example quoted by Albrecht. In one of the cases published in Lotheisen's series the kidney was removed and the growth described as an adeno-carcinoma. Ten years later the patient died in von Eiselsberg's clinic in Vienna of a late recurrence in the bronchial glands which showed the characters of a typical hypernephroma. As to the increase in the number of cases recognised may be cited the fact that Perthes, writing in 1896, 12 years after the publication of the papers of Grawitz, could find only 34 cases in all the literature, whereas now, after another 12 years, several hundred could probably be collected quite easily.

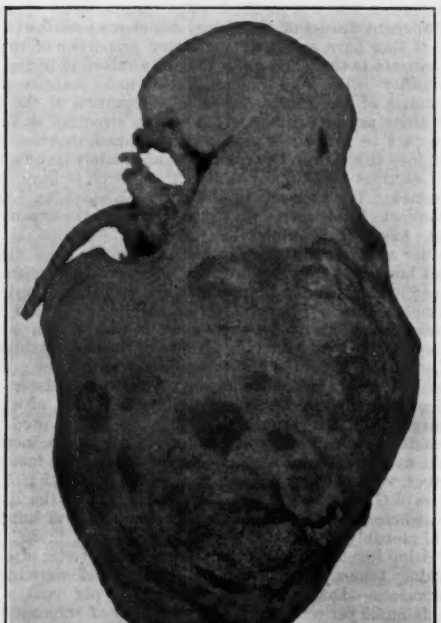
Putting together a few of the more recent series of cases of kidney tumour we find that out of 196, 146 were hypernephromata—that is, almost exactly 75 per cent. The remaining 25 per cent. are made up mostly of sarcomata, to a much less extent of squamous epitheliomata of the pelvis, while a true carcinoma of the kidney apart from hypernephroma is a very great rarity or possibly does not exist. The kidney tumours of children are practically all sarcomata; there is but one case on record of a true hypernephroma in an infant, and, as was long ago pointed out by Küster, malignant disease of the kidney is a disease of earliest childhood and middle age, affecting but little young adults and the aged. Hence, we may lay it down definitely that hypernephroma is the common kidney tumour of adults and conversely that any given kidney tumour in an adult is much more likely to be one of this type than anything else. This is the only etiological fact bearing on the disease which we can regard as absolutely definite. There is, of course, the ubiquitous history of injury, but the conditions here make it even more than usually liable to suspicion. We know that the tumour may be present for a very long time before it is discovered, so that injury may come to have its apparent importance merely by calling attention to the part; moreover, it is very probable that it may induce a hæmorrhage from a kidney the seat of a tumour when it would not do so from a sound one.

Macroscopic anatomy.—The most striking characteristic of the naked-eye anatomy of these tumours is their tendency to show a more or less definite encapsulation. Pathologically, of course, there is no true capsule, but to the naked eye the tumour, except in very late stages, is well defined and readily separable from the surrounding tissues. From the kidney substance even, the limitation may be fairly distinct and a partial separation may sometimes be effected. I have seen a case, for example, in which the dissection of the tumour out of the kidney seemed for a time during the operation to be feasible—though, of course, such an attempt had ultimately to be given up when the true nature of the disease became apparent. A second characteristic is that the tumours tend

to grow out of the kidney, leaving very often a large part of the latter to all appearances normal. Ultimately the tumour breaks through its false capsule and extends diffusely in the surrounding tissues. In this specimen the encapsulation is for the most part quite well marked, but you will see that in one place the growth has come through and is involving the perinephral fat.

The growth then commonly appears as a smooth nodular or bossy mass projecting from the surface of the kidney which has become, as it were, an appendage of the tumour. (Fig. 1.) The latter, examined externally, is of a yellowish-

FIG. 1.



Anterior aspect of specimen. At the hilum the renal vein distended by growth can be seen. In front of the lower pole of the tumour is the part where the capsule had been broken through and the surrounding fat was being involved.

white colour. Its substance varies from a considerable firmness, in which, however, there is always a certain element of elasticity on account of the presence of the capsule, to a definite fluctuation. Large cystic areas are not uncommon. A section shows a very characteristic picture. The tumour displays a striking lack of homogeneity. It is irregularly cut up into lobules by slightly marked fibrous bands. The substance is mostly yellowish-white in colour, opaque, and of structureless appearance. Parts are more translucent and greyish-white, others softened and caseating. The most characteristic thing, however, is the presence of irregular patches and sometimes considerable areas of a bright yellow colour. These are not unlike the slough in a deep-seated gumma, but are of irregular outline, of a brighter yellow, and not so tough. The picture is further diversified by the presence of areas of red or brown colour and granular or fleshy aspect; these are usually few.

The process of caseation may go on to the formation of considerable cysts. In the walls of such cysts calcification may sometimes be present—an evidence of the length of time these tumours may exist. The pelvis of the kidney is usually pressed on, and displaced, by the tumour. It is frequently stretched but not often dilated, while ulceration of the tumour into it is a rare and late manifestation. One more feature often present may be mentioned, and that is the early invasion of the renal vein by the growth; it is by no means unusual for the vein at the hilum of the kidney to be obviously distended by tumour substance growing within it. (See Fig. 1.) The naked-eye appearances of a hypernephroma, then, are fairly characteristic, so that the tumour is usually recognisable at once with a considerable amount of certainty.

To resume, the most important characters are the encapsulation, the absence of diffuse infiltration of the kidney so that some part of the latter recognisably projects from the mass, the multiformity of the section, the presence of caseation and sometimes cysts, the bright yellow areas, and finally, in some cases, the invasion of the renal vein.

CLINICAL MANIFESTATIONS.

From the anatomical characters described above much of the clinical behaviour of these tumours may be inferred, while such features as are not directly to be correlated in this way are expressions of the rate of growth.

Duration and rate of growth.—All degrees of malignancy and all rates of growth are found. The tumour may reach a great size and produce widespread metastasis within a few months; on the other hand, it may develop extremely slowly, years may elapse between the appearance of the initial symptom and the recognition of the renal tumour clinically; again, many more years may pass and then a solitary metastasis appear. Distant recurrences—six, eight, or even ten years after the removal of the primary tumour—are not very uncommon, and similar intervals may elapse between the first hæmaturia and the recognition of the enlargement of the kidney by palpation.

Striking differences may occur between the rate of growth of the primary tumour and that of the metastasis. Albrecht, for example, records a case in which several years elapsed after the removal of a metastasis before the kidney became palpable—and this in spite of the fact that after the recognition of the nature of the metastasis repeated and most careful examinations had been made. The resemblance between the behaviour of these tumours and that of malignant disease of the thyroid is very striking, and has been frequently commented on. The extremely long periods that in some cases have elapsed between the occurrence of the first symptom and the recognition of the kidney tumour or the appearance of metastasis has suggested that, like carcinoma of the thyroid, hypernephromata may exist for many years as an apparently benign growth.

Symptoms.—It may be said in general that some symptoms are almost always present, that they are very rarely characteristic and often not even suggestive of the disease, and that they are much more usually misleading than helpful.

General.—The general health of the patient is not usually in any way affected until long after the existence of the tumour has become readily recognisable. Perhaps the commonest general symptom, and the one most likely to mislead, is fever. A continued elevation of temperature to about 100° F. is not at all uncommon and may lead to a diagnosis of pyonephrosis, as I have known to happen several times.

Urinary symptoms.—In many cases these are entirely absent. Hæmaturia and lumbar pain are the commonest. The hæmaturia, when it occurs, is often profuse, tends sometimes to be associated with strain or local injury, and may spontaneously disappear for long periods. According to some authors, a minute trace of blood in the urine is very common. The pain is usually dull, aching, and continuous and not much influenced by rest or exercise. Renal colic may follow hæmorrhage or involvement of the renal pelvis by the growth leading to sudden obstruction.

Symptoms suggesting disease of neighbouring organs.—Intestinal and gastric symptoms are the commonest of these. Epigastric pain associated with digestion, nausea, vomiting, and loss of appetite may be present, and so definite as to give rise to some difficulty if there is no palpable tumour or its renal origin is not clear. In one of Albrecht's cases there were marked chemical alterations in the gastric contents and a formal diagnosis of carcinoma of the stomach was made. In the case reported here there was pain which seemed undoubtedly to be of gastric origin.

Evidences of involvement of veins.—Two such may be present, œdema of the legs and varicocele. The first is rare; I have known it once to be the first symptom which attracted attention. It is due to involvement of the vena cava, yet,

nevertheless, may be of unequal distribution on the two sides. It might be expected to be commoner with right-sided tumours than with left, but I know of no statistical evidence of this.

Varicocele.—Since this sign was first pointed out by Guyon it has attracted much attention, and monographs have been written upon it, notably by Hochenegg. It is not a sign which I have seen to be of any special value. To be suggestive it should come on suddenly in a middle-aged man, and it should not vary in size with the position of the patient. Finally it is more frequent on the left side, more significant on the right.

THE TUMOUR.

This may be dealt with under three heads—the characters of the tumour as renal, the characters of the tumour as hypernephroma, and aberrant types.

As *renal* the tumour is in the loin, which it fills from behind, or can be displaced into the loin; is in contact with the posterior abdominal wall from the first and with the anterior wall only late, so that a hand laid on the loin meets with resistance at once, while one laid on the anterior abdominal wall must be depressed more or less before resistance is felt. In front is the colon which may, if the tumour is large, be felt, or otherwise be recognisable by percussion after distension per rectum with air; the colon lies over the lower inner angle of the mass. The tumour moves in respiration; its margins are rounded and its surfaces curved so that it cannot lie flat against the abdominal wall unless very large.

As *hypernephroma* the tumour is never very large, except in the latest stages when diagnosis is no longer difficult; typically it is rounded and but faintly bossy, well-defined, moveable with the diaphragm, by manipulation and with changes in posture; it is firm, tense, and elastic, and sometimes obviously cystic; it frequently has somewhere in its outline one large distinct boss—the kidney; at times there is marked tenderness. It resembles a hydronephrosis in distinctness of outline, mobility, elasticity, and possibly long duration, but it does not usually give the impression of a single uniform cyst, while even the cystic forms have harder parts in them. It resembles a pyonephrosis in being associated with fever and in the elasticity and tenderness, but it is more distinct and more bossy in outline, much more moveable, usually of longer duration, and is but rarely accompanied by the presence of pus in the urine. Occasionally the simulation of the clinical picture of pyonephrosis is almost irresistibly exact.

Aberrant clinical types: latency of the primary tumour.—The primary tumour may be absolutely symptomless, so that there may have been nothing to attract the patient's attention to it, and he presents himself to the surgeon for a secondary growth in some distant part of the body. Such a secondary growth is almost always in a bone and is quite usually single. The kidney shares with the prostate, the thyroid, and the breast the character of being an organ in which growths originate which tend in an especial degree to produce metastasis in bones, and with the thyroid the character of frequently producing a metastasis which remains solitary for a long period. Hence it is a valuable clinical maxim that a malignant growth of a bone in an adult should never be operated on without the condition of these two organs having been carefully considered. A further difficulty, however, may be met with. Not only may the primary growth be symptomless, but it may grow so slowly as to be quite inaccessible to palpation at a time when obvious metastasis has occurred.

Simulation of other tumours.—On the left side the growth has been mistaken for gastric, splenic, and colic tumours, in each case the mistake being facilitated by the presence of symptoms suggesting disease of the suspected organ. In one case known to me the tumour forming a very large projection from the convex border of the kidney had rotated into a vertical position so that the lower pole of the kidney projected forward and the recess between it and the tumour simulated very closely the notch in the anterior margin of the spleen. It is not necessary here to repeat the various diagnostic features of these different tumours; it is enough to say that in general the most important features of a growth of the descending colon are that it is usually small, deep, and fixed, and of an enlarged spleen that it is quite superficial and has a sharp edge.

So marked is the tendency to the production of single secondary growths that these cases, with perhaps some similar thyroid cases, are amongst the very few instances in surgery where a primary growth and a systemic metastasis may be operated on with a rational hope of obtaining a cure. The clinical characters, then, of this disease are such as to make failures in diagnosis extremely likely to occur, while these failures are exceptionally serious as they may lead the surgeon to overlook in its early stages a form of malignant disease which offers a reasonable hope of curability, or to embark upon dangerous and hopeless operations.

TREATMENT.

The indications for treatment when once the diagnosis is established are usually quite clear. A kidney containing a hypernephroma must be removed. However tempting it may appear to do a local resection of the kidney when the tumour is small, experience teaches that nothing less than a total nephrectomy is justifiable. In the absence of secondary growths mere size of the tumour should not be regarded as a contra-indication unless there is obvious involvement of other abdominal organs. In this connexion it is interesting to notice that although tumours of the colon suitably placed frequently involve the kidney, tumours of the kidney rarely involve the colon. Again, as already said, the presence of a *solitary* metastasis in an accessible position should not contra-indicate operation on that, and of course on the kidney.

The technical details of the operation must be designed so as to provide for four essential requirements. These are: preliminary exploration of the extent and connexions of the tumour and of the condition of the opposite kidney; free access to the tumour and especially to the pedicle; early division of the pedicle; and removal of the fatty capsule of the kidney with the tumour.

Preliminary exploration can only be carried out satisfactorily through a peritoneal incision, and is essential to safeguard the surgeon from embarking upon a dangerous and bloody operation only to find the completion of it impossible.

Free access to the pedicle and early division of it are important for two reasons: first, the prevention of shock, which is very great if on account of an inadequate incision much pulling on the parietal peritoneum and pedicle is necessary; secondly, the prevention of the detachment of emboli of the growth during the manipulation—the actual occupation of the renal vein by growth being very common. Removal of the fatty capsule is an important precaution against recurrence, but it is unfortunately difficult to carry out, and one is tempted not to do it by the ease with which the tumour shells out.

The incision which best allows these various requirements to be carried out is, in my opinion, undoubtedly the transverse. If there is doubt as to the nature of the case the incision may be begun in the usual oblique direction in the loin. As soon as it is clear that a tumour of any size has to be dealt with the incision is carried transversely forwards, if necessary as far as the edge of the rectus. With the patient on the side and a large sandbag under the opposite loin, the wound gapes widely and affords admirable access to the tumour without any of the violent pulling and tearing which are so disastrous in these operations. Across the wound, somewhere about the plane of the anterior superior spine, if the tumour is of moderate size, the reflection of the peritoneum runs vertically. The peritoneum should now be incised in front of the reflection and the relations of the tumour explored intraperitoneally. If nephrectomy is decided upon, the posterior parietal peritoneum with the colon is pushed off the front of the tumour, the pedicle defined, tied in the usual three parts, and divided, care being taken to remove as much of the renal vein as is possible. Now the tumour with the surrounding fat can be removed without the usual dangers of shock or embolism. The peritoneal incision is closed, the fleshy muscles should be stitched in one layer, the external oblique in another, and a small drain brought out in the posterior angle of the wound.

The operation I have described was done in the case which has been my text to-day. The patient, although by no means in a very satisfactory general condition, had no shock whatever, the operation throughout was extremely easy, and the wound healed by first intention.

A word may be added upon prognosis. The mortality of nephrectomy for tumour is said to be about 25 per cent. In

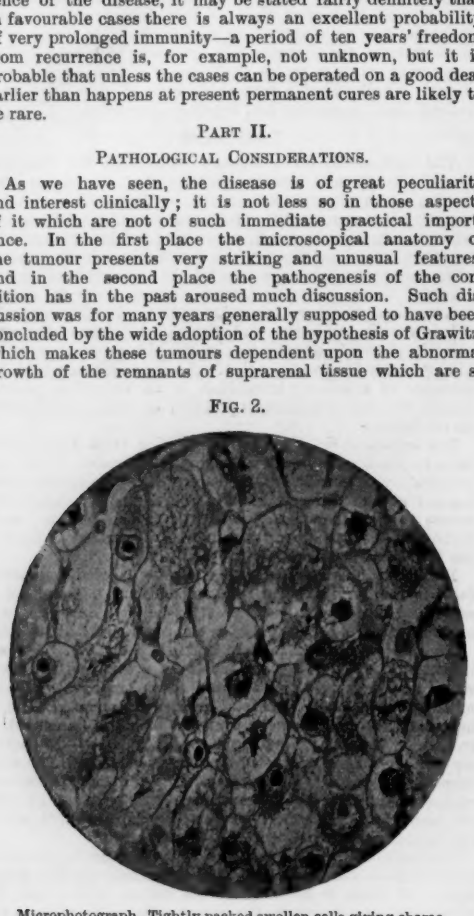
adults it must be considerably less than this. Shock no doubt is largely responsible for the deaths, and I think there can be little doubt that the fear of an adequately large incision is responsible for most of the shock. As to recurrence of the disease, it may be stated fairly definitely that in favourable cases there is always an excellent probability of very prolonged immunity—a period of ten years' freedom from recurrence is, for example, not unknown, but it is probable that unless the cases can be operated on a good deal earlier than happens at present permanent cures are likely to be rare.

PART II.

PATHOLOGICAL CONSIDERATIONS.

As we have seen, the disease is of great peculiarity and interest clinically; it is not less so in those aspects of it which are not of such immediate practical importance. In the first place the microscopical anatomy of the tumour presents very striking and unusual features, and in the second place the pathogenesis of the condition has in the past aroused much discussion. Such discussion was for many years generally supposed to have been concluded by the wide adoption of the hypothesis of Grawitz, which makes these tumours dependent upon the abnormal growth of the remnants of suprarenal tissue which are so

FIG. 2.



Microphotograph. Tightly packed swollen cells giving characteristic mosaic appearance. A very common picture met with in hypernephroma sections. × 400.

commonly found in the kidney. In spite of the increasingly numerous contributions which have been made to the clinical side of the subject in the last few years, the pathology of it has been left very much at the point to which it was brought by Grawitz 24 years ago, all the various authors taking it for granted that there was no fruitful opening for investigation in that direction. This peaceful acquiescence has at length been broken by a remarkable paper by Stoerk,[1] who brings forward a formidable array of arguments against the accepted view, and in favour of regarding these growths as being essentially of renal origin. The whole subject, therefore, can no longer be looked upon as being finally crystallised, but rather as being once more in solution, so that no contribution to it, however summary, can leave this aspect unconsidered. Such consideration must, of course, begin with some description of the actual facts of the histology of the tumour, facts upon which the different authorities are fairly agreed. The most important thing to grasp at the outset is the variation in the structure of any given tumour from part to part. This variation affects the actual elements of the tissue on the one hand, and the arrangement of the tissue on the other.

The elements of the tumour.—The tumour is always chiefly made up of cellular elements, and such stroma as is present is usually inconspicuous and always irregularly placed.[2] Any given section or part of a section will usually be occupied almost exclusively by the cells. These display the

FIG. 3.

Microphotograph. Typical section of tubular part of tumour; a branching intracystic process clothed with relatively small opaque cells. × 400.

FIG. 4.

Microphotograph. Very large giant cell arising in a perivascular column. The thin-walled vessel can be seen below, the large pear-shaped cell being attached to it by a thin stalk. The cell shows a darker and a lighter texture of protoplasm. The upper dark part is infiltrated with leucocytes. × 400.

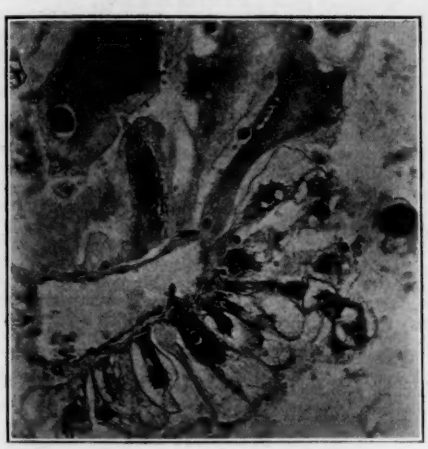
[1] Ziegler's Beiträge, Band xliii., 1908, Zur Histogenese der Grawitz'schen Nierengeschwülste.

[2] The specimen from which the illustrations were obtained was cut into numerous blocks, a large number of which were imbedded in paraffin and cut in serial sections from 1·5 to 3 μ thick. The sections were stained by Pappenheim's or by van Gieson's method. The former, on the whole, proved the more satisfactory, especially for photographic purposes.

most remarkable variety of size, form, and reaction to stains. The most common type of cell is large, globular, with distinct outline, a very well-marked nucleus, and a strikingly clear cell body. This clearness does not give the impression of being due to vacuolation, but rather to swelling of the protoplasm. These "swollen cells" with their sharp outlines form a very noticeable feature in almost all cases. They look tightly packed together, suggesting that the swelling of them has been secondary, and the thin dark lines marking their boundaries give to the section the appearance of a mosaic. (Fig. 2.)[3] The other main type, which we may call the "opaque cell," is strikingly different. The protoplasm is granular, often obviously spongy, and stains well. So opaque is the protoplasm that it may sometimes be difficult to make out the nucleus, which is in fact large and well defined when visible. These opaque cells are generally smaller than the "swollen cells" and have angular outlines, being always obviously less closely packed and sometimes in very thin sections being quite loosely arranged. (Fig. 3.) Both types of cell may occur together in the same field, clear and dark cells being irregularly scattered together, or, more usually, one or other type will prevail in a given part of the section and sometimes even throughout a given tumour.

While as a rule the dark cell is smaller than the clear cell it is also true that the largest cells of all are "dark cells." In some hypernephromata giant-cell formation is very striking, as was the case with the tumour reported here. This tumour contains cells of a size actually monstrous—sometimes as typical cells with well-marked outline and nucleus, at other times as huge plasmodium-like masses. In these very large cells the protoplasm is always well stained and shows a spongy structure. As a rule the central protoplasm is more darkly stained, while the peripheral part forms a regular margin, one-sixth to one-eighth of the diameter of the cell, where the protoplasm, while stained and spongy, is of a much lighter colour. (Figs. 4 and 5.)

FIG. 5.

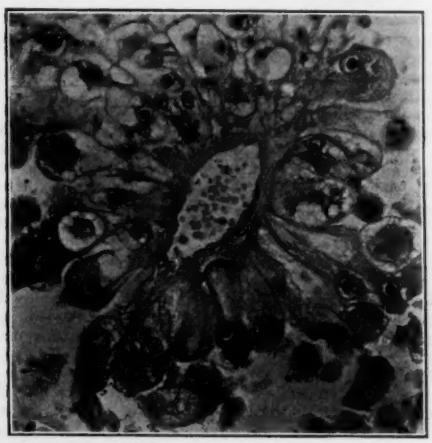


Microphotograph. Section of a perivascular cylinder. The thin-walled vessel is for the most part surrounded by the characteristic large "swollen" cells, but above two large club-shaped giant cells have developed. These have opaque protoplasm. × 267.

Some of the large plasmodial masses seem definitely to be multinucleated, but in others it appears that what at first sight are nuclei are really polymorphonuclear leucocytes which have invaded the cell. These leucocytes are distinguishable by the characteristic form, the dark colour, and the compact appearance of the substance of the nucleus. In some cases they seem to be surviving in the cells in which they lie, for they retain their sharpness of outline and staining characters though lying far within the giant cell. In other cases they appear to undergo destruction, finally leaving a vacuole as sole sign of their former presence. The view taken here as to the nature of these inclusions is supported by the facts that in places in the neighbourhood of a cell showing them leucocytes can be seen not only in the adjacent vessels but penetrating the vessel wall and even partly imbedded in the giant cell—and that the inclusions found altogether within the giant cell closely resemble in appearance these leucocytes. (Fig. 4.)

Some sections contain numerous large circular masses of very regular outline showing the distinction into peripheral lighter and central darker zones. As a rule no nuclei can be detected in these, possibly on account of the opacity of the protoplasm. There can be no doubt that the development of giant cells to the extent seen in this particular specimen is altogether unusual; in many places, however, they are completely absent, and the picture is that of a typical hypernephroma. A study of almost any section containing them shows that the giant-cell forms are derived from the increase in size of a single cell rather than the aggregation of a

FIG. 6.



Microphotograph. Typical section of perivascular cylinder. Above is seen the characteristic mosaic appearance of swollen cells tightly packed together. × 267.

number; the evidence for this view is that it is not unusual to find in a series of cells arranged in the characteristic radial way round a blood-vessel that one has undergone this giant growth and projects like a huge club far beyond its fellows into the surrounding tissues. (See Fig. 4.)

Arrangement of the tumour elements.—The outstanding fact in the structure of the tumour is its perivascular arrangement. Almost everywhere the cells can be seen to be in very close relation to thin-walled blood-vessels, though between them and the actual lining cells of the vessel a little connective tissue can be seen. A very common and striking form is a vessel with large cells arranged round it radially—the cells mostly elongated and some showing the club shape and great size already referred to. Around such a cylinder the tumour substance is usually very loose, giving the impression that the perivascular arrangement is an essential part of the structure. (Fig. 6.) Places showing these perivascular cylinders seem to be intermediate between two broad types of structure, which are classified by Stoerk as the "solid alveolar" and the "tubular perivascular." Either of these types may predominate in a given tumour or part of a tumour.

Alveolar type.—In places this resembles very closely a highly cellular carcinoma and may show a definite fibrous stroma. In the tumour here reported such places are very few and small, and when they are present the sharp definition of the boundaries of stroma and parenchyma is not so clear as in a typical carcinoma. In general the alveolar part has a vascular stroma consisting merely of a narrow thin-walled vessel, surrounded in places by the smallest amount of connective tissue. In these situations the structure resembles that seen in parts of an adeno-carcinoma of the thyroid—that is, a cellular mass with a stroma consisting of blood-vessels only. For the most part the

[3] The microphotographs were taken with Zeiss apochromatic lenses by the author and Mr. H. Morriston Davies.

alveoli are fairly small and their contents solid and tightly packed. When the alveoli are larger and the packing is less tight, the cells stick to the vessels but disappear in large part from the rest of the spaces, so that the perivascular cylindrical structure already described is produced, and the cells no doubt being freer to grow are apt to produce the monstrous club-like forms. Degeneration of the cells of the tumour readily occurs, and it does not need the examination of many sections to show that degenerative changes have a special tendency to appear in the centre of the alveoli. Such a degenerating alveolus will be of large size, will show a peripheral zone of healthy cells several layers thick and a central mass of protoplasmic and nuclear débris. The picture then comes closely to resemble some of the tubular carcinomata of the breast in a striking way. Some of the alveoli showing this degenerative change are elongated and then give the picture of a tube lined by an irregular layer of cells and containing a central column of débris—the resemblance then to a swollen tubule of the kidney is remarkably close. The general arrangement is nevertheless obviously alveolar.

Tubular type.—In these parts of the tumour the structure is that of a columnar cancer; elongated ramifying spaces are present, lined for the most part by a single layer of well-formed cells of an irregularly cubical or columnar form. Papillary processes projecting into spaces may be very typically developed but do not as a rule show any great complexity of ramification. (Fig. 3.) The stroma here also for the most part consists of thin-walled vessels which run between the tubules. In general in this tumour the tubular parts show smaller and more regular cells than do the alveolar, so that the suspicion seems justified that the former is the essential type of the tumour and that the latter is derived from it secondarily.

The hypotheses of Grawitz and Stoerk.—The principal arguments of Grawitz in favour of the supposed origin of these tumours in suprarenal rests are summarised by Stoerk as follows. 1. The correspondence between the subcapsular situation of the tumour and that of the islets of suprarenal tissue which are found in the kidney. 2. The striking differences of the characters of the tumour cells from those of the renal epithelium. 3. The presence of fat in the tumour cells and in the cortical cells of the suprarenal and its absence from the kidney epithelium. At the outset of his criticism Stoerk asks the certainly weighty questions, Why do hypernephromata always originate in the kidney and never in the suprarenal? and secondly, Why are suprarenal tumours both benign and malignant always so different in structure from hypernephromata? He points out that islets of suprarenal tissue are found in the liver, but that hypernephroma never occurs there. He shows also that while the suprarenal islets are commonest in the upper pole of the kidney, hypernephromata affect chiefly the central part.

With regard to the subcapsular situation, he remarks that while suprarenal islets may occur actually within the substance of the fibrous capsule of the kidney, this is never the case even with the smallest hypernephromata. The supposed resemblance between the cells of the hypernephroma and those of the suprarenal Stoerk denies with the greatest emphasis. The "swollen cell" especially, which is the most characteristic feature of hypernephroma sections, is totally unlike anything found in the suprarenal body. It is true the hypernephroma cells show the presence of a doubly refracting substance, as do the suprarenal cells, but Stoerk adds that many other epithelial tumours show the same phenomenon. With these and other arguments Stoerk makes a very formidable attack upon the hypothesis of Grawitz, and he follows this up by showing that the hypernephroma is essentially a tumour of tubular structure tending to the production of spaces and intracystic formations, while nothing of the kind occurs in the suprarenal. Finally, he produces evidence to show that in the small "adenomatous" masses found in kidneys undergoing degenerative changes, structures are to be found resembling very closely many of the most characteristic parts of a hypernephroma, and he gives some very striking illustrations. He concludes, therefore, that the tumour must be classified as an adenoma, cystoma papillare, or carcinoma—according to the form in which it occurs.

It has not been possible in any way to do justice to Stoerk's paper, and I am fully aware that I have given but the roughest summary. Still, it will be obvious that the work contains good grounds for a very serious reconsideration of the pathogenesis of these tumours. Personally I hasten to acknowledge that, though up to the time of reading Stoerk's paper fully acquiescing in the accepted views, I have been a good deal impressed by his arguments, and I think they may be added to. There seems to be very little doubt that these tumours are essentially tubulo-cystic in structure; the specimen in the case reported here confirms this very strikingly, and shows, I think, clearly that the perivascular arrangement which seems at first sight the primary structure of the tumour is a secondary development.

What would appear to be a significant argument seems to me to follow from the very great relative frequency with which these tumours are now known to occur. When Grawitz first enumerated his views in 1883, the tumour was thought to be rare, but in 1905 we already find Albrecht saying that hypernephromata undoubtedly form the great bulk of kidney tumours and that, apart from epithelioma of the pelvis, carcinoma is of the greatest rarity. To-day it would probably almost be justifiable to say that all primary epithelial tumours of the kidney substance are of this nature. This would leave us in the remarkable position of having to believe, if we maintain Grawitz's hypothesis, that in a glandular organ so subject to malignant disease as is the kidney, a true carcinoma of the gland substance does not occur. Moreover, many facts of the growth of these tumours are quite as consistent with the views of Stoerk as with those of Grawitz. For example, if the tumour originates in the convoluted tubules it must always be primarily in the cortex; again, the essential circulatory condition of its origin will be a slow venous blood current, the convoluted tubules receiving their blood-supply entirely through veins from the glomeruli, and its growth will begin in the most intimate relation to the purely venous network surrounding these tubules. It is perhaps possible that here may be found a hint of the reason why the tumour shows such a tendency—so rare among the epithelial growths—to penetrate and spread within the veins, and an inclination to develop metastatically in bones so marked that it is nearly true to say that if there is a single secondary growth it will be in a bone.

One of the most valuable lines of thought which are constantly being suggested by Stoerk's paper is the question as to what influence we may expect the original structure of an organ to exercise upon the structure of a carcinoma developing in it. It would seem probable *a priori* that the more elaborate the normal arrangement of the epithelium of a glandular organ is, the more complicated may we expect to be the picture which a carcinoma growing in it may present. It is in this connexion perhaps suggestive that the only organ in the body approaching the kidney in the complexity of its tubular structure, and, like the kidney, maintaining its function until late in life, is the testicle. The complexity and multiformity of the tumours of the testis need no emphasising. A careful comparison of the structure of the tumours of the two organs from this point of view would probably yield much of interest, and at any rate perhaps justify the indulgence in speculation which suggests it.

THE RESULTS OF A YEAR'S USE OF VACCINES IN GENERAL MEDICINE.[1]

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WHEN your secretaries kindly asked us to bring before the society some subject of therapeutic interest it struck us that it might lead to a useful exchange of opinion if we laid before you every case which during the past year we have conjointly treated with vaccines, excluding those treated with tuberculin. Our only reason for excluding these is that tuberculosis is usually such a slow disease that it is impossible to draw conclusions as to treatment until many months have elapsed. The following cases have all occurred since Jan. 1st, 1908. Those at present still under treatment are not included, but

[1] A paper read before the Therapeutical and Pharmacological Section of the Royal Society of Medicine on May 4th, 1909.

with that exception we give every case which we have jointly treated with vaccines, so that we may as far as possible arrive at a correct view of its value. We have grouped the cases under the following heads: A. Genito-urinary System; B. Alimentary System; C. Empyemata and Subdiaphragmatic Abscesses; and D. Miscellaneous.

A. *Genito-urinary System.*

CASE 1.—The patient, a female, aged 49 years, married, had suffered from multiple arthritis for nine months. It had been regarded as osteo-arthritis. No benefit had followed any of many lines of treatment. The gonococcus was not isolated from the vaginal discharge, but the index to it was 4·0; therefore she was treated with a stock trivalent gonococcal vaccine in doses of from 5,000,000 to 10,000,000 at intervals of seven days. Three doses were given. The arthritis entirely subsided and she was discharged cured at the end of a month.

CASE 2.—The patient, a female, aged 30 years, married, had suffered from multiple arthritis for three weeks. The gonococcus was isolated from the urethra. The patient was treated with trivalent stock vaccine. She received three doses of 5,000,000, 5,000,000, and 7,500,000 respectively at intervals of six days. She was discharged cured, and when seen three weeks later was quite well.

CASE 3.—The patient was a male, aged 36 years. First attack of gonorrhœa. Two months later arthritis followed, and when the patient was seen it had existed two months. Many joints in the body were affected. The gonococcus was isolated from the urethra and the patient was vaccinated with a vaccine prepared from his own gonococcus. Four doses varying from 5,000,000 to 25,000,000 were given at intervals of six days. He was discharged cured, and when seen three weeks later was quite well.

CASE 4.—A male, aged 26 years. First attack of gonorrhœa. Severe, prolonged, followed by multiple arthritis four months after the gonorrhœa. On admission the arthritis had lasted for three weeks; the gonococcus was isolated from the urethra and a vaccine was prepared. Owing to the number of generations that elapsed before the gonococcus was isolated in a state of purity larger doses than usual were employed. The patient received three doses of 100,000,000, 100,000,000, and 200,000,000 respectively at intervals of 12 days. The opsonic index varied during this period from 0·7 to 3·6. The arthritis entirely disappeared in five weeks and had not returned five weeks later.

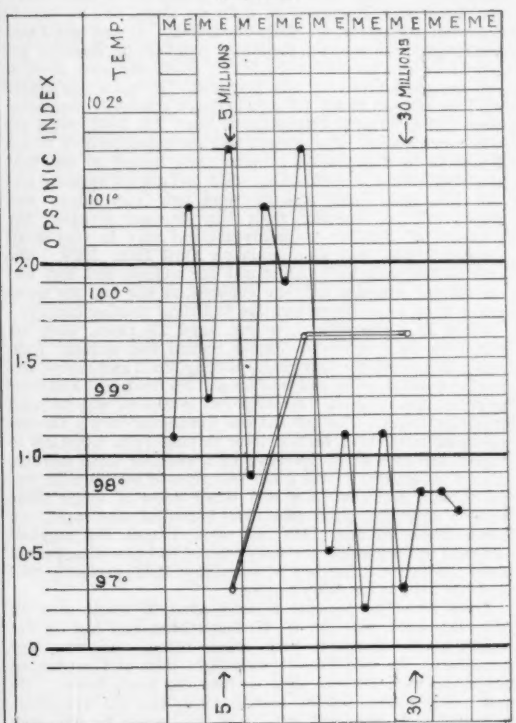
CASE 5.—The patient, a female, aged 45 years, seen with Dr. C. Ewart and Dr. J. Mitchell Bruce, had five weeks before we first saw her begun to suffer from pains and swelling in many joints. Remedies for gout were tried but did not relieve. The ears and the bridge of the nose became swollen and double conjunctivitis supervened, followed at the end of four weeks by severe cystitis, with blood and pus in the urine, and high temperature and pain over the bladder and both kidneys. When first seen by us she was very ill with cystitis and double pyelitis, vomiting, rapid pulse, and high temperature. She was so ill that it was thought likely that she would die. *Bacillus coli communis* was isolated from the urine and a vaccine was prepared, the index to the organism being 0·35. A 5,000,000 dose of the vaccine from her own *Bacillus coli communis* was followed by a rise of the index to 1·6. Four days later a dose of 30,000,000 was injected, followed after ten days by a dose of 250,000,000. Improvement began directly after the first injection. The patient made an uninterrupted recovery, and when we saw her a year later there had been no return of the trouble. The range of temperature is well shown on the accompanying chart. (Chart 1.)

CASE 6.—The patient, aged 26 years, seen on March 18th, 1909, with Inspector-General J. J. Dennis, R.N., had had enteric fever from Christmas, 1908, to the middle of February, 1909. From Feb. 15th to 25th the temperature had been normal; then high evening and low morning temperatures suggestive of pus prevailed, and had continued ever since. On March 15th pus appeared in the urine and the right kidney became tender. *Bacillus coli communis* and *Staphylococcus albus* were found in the urine, and vaccines of each were prepared. The index was 1·45 to *Bacillus coli communis* and 0·44 to the *Staphylococcus albus*. A dose of 5,000,000 of the patient's own *Bacillus coli communis* vaccine was injected on March 20th. By March 23rd the temperature had become normal, and another dose of 5,000,000 was given, and a dose of *Staphylococcus albus* vaccine of 100,000,000. On March 29th there was still some pus in the urine and a dose of 100,000,000 *Staphylococcus albus* vaccine was given, and on March 31st a dose of 10,000,000 *Bacillus coli communis* vaccine was given. No further treatment was necessary, and the patient has remained quite well and has gained much weight.

CASE 7.—The patient, a woman, aged 84 years, seen on July 6th, 1908, with Dr. H. Sharman, had had a few weeks previously slight left hemiplegia, since when cystitis had slowly developed. *Bacillus coli communis* was isolated from the urine and a vaccine was prepared. Three doses of vaccine from her own *Bacillus coli communis* were given—viz., 2,000,000 on July 9th, 5,000,000 on the 13th, and 10,000,000 on the 20th. No other treatment was adopted. By the 23rd she was well enough to get up and she made an uninterrupted recovery.

CASE 8.—The patient, an unmarried woman, aged 30 years, was admitted into Guy's Hospital for pain over the right kidney region and severe cystitis of eight months' duration.

CHART 1.



Case 5. Bacillus coli infection. Temperature raised for five weeks before this chart begins. The double line denotes the opsonic index.

Bacillus coli communis was isolated from the urine, a vaccine was prepared, and three doses of 5,000,000, 5,000,000, and 10,000,000 respectively were injected at intervals of six days. The pain subsided after the first injection, and the pus in the urine disappeared entirely after the third injection. The patient was discharged cured.

CASE 9.—The patient, a woman, aged 40 years, seen with Dr. H. W. Armstead, had been first seen by one of us in 1907 for left renal calculus. This had so destroyed the kidney that on consultation with Mr. A. A. Bowlby it was found necessary to remove the whole organ. The patient improved much after operation, but some time subsequently she began to suffer from recurrent attacks of pain in the right kidney, associated with pyrexia. She was seen on Feb. 18th, 1909, for these symptoms. There was no pus in the urine, but it contained large numbers of *Bacillus coli communis*, whilst the index to the organism was 0·6. She has been repeatedly vaccinated with large doses of a stock

vaccine and small doses of a vaccine from her own bacilli, but without any marked improvement. She refuses to be x rayed and will not entertain the idea of another operation.

CASE 10.—A man, aged 50 years, was admitted for severe aortic and mitral disease. He also suffered from retention of urine due to stricture. For this catheters had been used, and he had cystitis. *Bacillus coli communis* was isolated from the urine. Two doses of 5,000,000 of vaccine prepared from this bacillus were given at intervals of seven days. There was no improvement in the cystitis and he died from his heart disease six days after the last injection.

B. *Alimentary System.*

CASE 11.—The patient, a married woman, aged 38 years, seen with Dr. C. S. Pantin on March 18th, 1908, had had every three weeks for the last eight months attacks lasting three days and consisting of nausea, heartburn, and a severe feeling of illness with shivering and slight rise of temperature which quite incapacitated her. During an attack she was always very constipated. Since the attacks began she had lost much flesh. She had seen several medical men and duodenal ulcer and atonic dilatation of the stomach had both been diagnosed at different times, but no benefit followed treatment for these conditions. It was found that washings of the stomach contained numbers of *Bacillus coli communis* and no other organisms. From her own *Bacillus coli communis* a vaccine was prepared. It was administered at intervals of about 12 days in doses gradually increasing from 5,000,000 to 50,000,000 until Sept. 7th, 1908, when she was seen again. Her weight had increased from 7 stones 9 pounds to 8 stones 10½ pounds. She looked so well that she was hardly recognisable. She had a good appetite and she felt well. Her attacks were now very slight and infrequent. A washing from the stomach revealed the presence of *Bacillus coli communis*, but only in very small numbers. She was seen again on April 19th, 1909. She then looked well, had maintained her weight, and had had no further attacks, but she suffered, as she had for many years, from some discomfort due to a right floating kidney.

CASE 12.—The patient, a boy, aged 12 years, seen on Oct. 17th, 1908, with Dr. James Smith, had suffered from ulcerative colitis for four years, passing blood and mucus and having pyrexia, pain, and tenderness. No treatment had done any permanent good. *Bacillus coli communis* was isolated from the fæces. The patient was vaccinated with a vaccine prepared from this; he had doses varying from 5,000,000 to 50,000,000 at average intervals of a week for three months. At the same time he was given two pints of soured milk prepared with lacto-bacilline and small doses of cyllin three times a day. The improvement was immediate and rapid. An examination on Jan. 11th last showed that the atypical *Bacillus coli communis* previously found had now disappeared from the fæces. The boy is now (May, 1909) perfectly well and has been so for many months.

CASE 13.—The patient, a male, aged 30 years, seen on Nov. 6th, 1907, with Dr. W. W. Shackleton, had had for five weeks severe diarrhœa with much blood. He was very blanched. He was treated with light diet, and astringent injections were thrown high up into the large bowel. He got much better, but in March, 1908, the old symptoms returned and continued until July 9th, when he was seen again. An examination with the sigmoidoscope showed the whole mucous membrane to be intensely injected. A *Bacillus coli communis* was isolated from the fæces and a vaccine was prepared. A dose of 5,000,000 was given on July 18th, 5,000,000 on the 21st, 10,000,000 on the 31st, and 5,000,000 on August 18th. The patient then discontinued the treatment, his symptoms being improved, but they returned in October. Four doses were then given at fortnightly intervals, the patient again recovered, and when last heard of (May, 1909) was quite well.

CASE 14.—The patient, a male, aged 17 years, seen on May 16th, 1908, with Sir William Allchin and Dr. E. H. Lendon, had had severe ulcerative colitis for many months, passing mucus and much blood. He was very ill and was confined to bed. *Bacillus coli communis* was isolated from the fæces and a vaccine was prepared. He was given small initial doses, rapidly increased to 50,000,000, at fortnightly intervals. He gradually improved. The vaccine treatment was continued until last March, although in February he was well, the diarrhœa and passage of blood and mucus having ceased for a long while, he had gained weight, and was able to go to his work. He is now (May, 1909) perfectly well.

C. *Empyemata and Subdiaphragmatic Abscesses.*

CASE 15.—The patient, a tall man, seen with Dr. J. H. E. Brock and Dr. F. K. Holman, who met him at Tilbury Docks on his arrival from India, was a mere skeleton, weighing 5½ stones, and was so ill and weak that it was doubtful if he would reach his home at Hampstead alive. I (W. H. W.) saw him a day or two afterwards; he had a hectic temperature, was coughing up considerably over a pint of blood and pus like anchovy paste in the 24 hours, and his pulse was feeble and rapid. I was asked to decide whether or not the abscess should be drained, and I gave it as my opinion that the patient was so ill that he stood a better chance of recovery without than with a severe operation. In coming to this opinion I was influenced not only by his extreme weakness but also by the fact that examination did not give any clue as to the seat of the abscess, and therefore it might have been a tedious operation to find it, and the amount of blood in the expectoration suggested that incising the abscess might lead to serious hæmorrhage. We accordingly put the patient by a wide-open window and fed him up. Slowly his temperature fell, the expectoration diminished, and he gained weight. After about a couple of months he was able to travel and spent some months continuing the open-air cure in various seaside places in Devon and Cornwall. Six months after he landed in England he was unrecognisable; he had doubled his weight, but the expectoration was still about four ounces a day of pus like anchovy paste. This was examined and was found to contain *Streptococcus pyogenes longus*. We prepared a vaccine, and on Feb. 15th a dose of 10,000,000 was given, on the 19th one of 50,000,000, on March 7th one of 50,000,000, and on the 27th one of 100,000,000, the dosage being checked by observations of the opsonic index. Under this treatment the expectoration ceased. The patient when last seen, a year after his arrival in England, had, so far as could be made out, nothing the matter with him. There was no expectoration. His weight was 12½ stones—that is, 7 stones more than on arrival; he looked perfectly well and could walk up hills with ease. An examination of the chest with the x rays, made by Dr. A. C. Jordan, showed that the completeness of the cure was remarkable. The right lung showed no evidence of having had immense quantities of pus (the patient calculated it was 15 gallons since his arrival in England) coughed through it. The right wing of the diaphragm was two inches higher than the left, and its excursion, though excellent, was only half that of the left.

CASE 16.—The patient, an old man suffering from mental disorder, seen with Mr. R. W. Prentice, had had pneumonia four months previously. Since then he had had a hectic temperature and had been coughing up pus; he had physical signs at the right base. He would not hear of any operation, and, considering his age and his mental condition, we were not sorry. We cultivated *Streptococcus lanceolatus* from the expectoration and prepared a vaccine. In six weeks two injections of 5,000,000, three of 10,000,000, and one of 50,000,000 were given. He improved greatly under this treatment; his expectoration ceased, his temperature became normal, and he gained weight. When heard of nine months after he was first seen he remained well.

CASE 17.—The patient, a man, aged 60 years, seen in consultation with Mr. W. Arbuthnot Lane, was short-circuited by him for a duodenal ulcer on Dec. 26th, 1908. Two days after the operation he vomited much blood, apparently from the ulcer; some got down into his lungs. Signs of pneumonia appeared at the base of the left lung. He coughed up some pus soon after. His temperature remained raised and he coughed up pus during the last three weeks of January. On Jan. 29th *Staphylococcus aureus* and *Streptococcus longus* were found in the expectoration, and a vaccine was made from each. On Feb. 5th he received a dose of 5,000,000 streptococci, and on the 8th 5,000,000 streptococci and 10,000,000 staphylococci. He then went to Bournemouth, under the care of Dr. G. Muspratt, and on Feb. 13th had 10,000,000 streptococci and on the 16th 25,000,000 staphylococci. Directly the vaccine treatment was commenced he began to improve. His temperature slowly fell, his expectoration quickly ceased, and he was soon able to walk about. He is now (May, 1909) quite well and hard at work.

CASE 18.—The patient, a female, aged 35 years, had (following a gastric ulcer) a subdiaphragmatic abscess

which was drained. *Streptococcus longus* was cultivated from the pus, a vaccine was prepared, the patient had two injections of 5,000,000, and did uninterruptedly well.

CASE 19.—The patient, a female, aged 21 years, was admitted to hospital for perforated gastric ulcer. An operation was performed by Mr. C. H. Fagge. Subsequently signs of a subdiaphragmatic abscess on the right side developed, and a few hours before operation for this was to take place, she vomited a quantity of pus. Her temperature came down but soon began to go up again, and pus was discharged by the bowel. From this the *Streptococcus longus* was isolated. A vaccine was prepared from it. After three doses of 5,000,000 each the temperature became normal and the patient was discharged cured.

CASE 20.—The patient, a female, aged 34 years, was admitted to hospital on Sept. 30th, 1908, for expectoration of pus. She had had pneumonia a month previously. Physical signs and the x rays revealed an empyema in the right chest in front, extending from the second to the fourth ribs. From the pus she expectorated *Bacillus coli communis*, *Staphylococcus aureus* and the pneumococcus were isolated. Her opsonic index to the colon bacillus was 0·43, to the staphylococcus 1·024, and to the pneumococcus 2·42. Vaccines were prepared from all three, but as the index was normal to the staphylococcus and raised for the pneumococcus the *Bacillus coli communis* vaccine was the only one used. Four doses—viz., 2,000,000, 8,000,000, 20,000,000, and 25,000,000—were given at intervals of a week to ten days. The temperature had been considerably raised for some weeks, but after the first injection it began to fall. After the third it was normal and remained so till her discharge. The expectoration entirely ceased and she gained 2 stones in weight. The index to the staphylococcus and pneumococcus was taken several times and remained constant; the index to the colon bacillus was raised as a result of the injections. The physical signs improved and an x ray picture taken before her discharge showed great shrinkage of the cavity of the empyema. During most of her stay in the hospital she was on the open-air balcony day and night.

CASE 21.—The patient, a boy, aged nine years, was admitted to hospital for double empyema following double pneumonia. The right empyema was opened on Feb. 6th and the left, after two aspirations, on March 9th. A vaccine was prepared from the pneumococcus present in the pus, and two doses of 5,000,000 and two of 10,000,000 were administered at intervals of seven days. The boy made an uninterrupted and rapid recovery, gained much in weight, and was discharged cured with the wounds perfectly healed.

CASE 22.—The patient, a man aged 39 years, was operated on early in September, 1908, for empyema on the right side. Two pints of pus were let out. He appeared to be doing well and the wound closed, but at the end of September the temperature began to rise and continued hectic until Nov. 2nd, when he was first seen by us. The x rays and physical signs showed an empyema near the spine at the eighth rib on the right side. Leucocytosis 25,000. Sir Alfred Fripp drained this empyema, letting out a few ounces of pus on Dec. 15th. *Staphylococcus aureus* and *Bacillus coli communis* were obtained from the pus. Vaccines of each were prepared and injections varying from 5,000,000 to 50,000,000 staphylococci and from 5,000,000 to 10,000,000 colon bacilli were injected at average intervals of a week for three months. Although the patient went to the seaside he has not improved much; there is still some discharge from the wound now (May, 1909), he has only gained a little weight, but his temperature is consistently lower although not normal. He is pale and anæmic. There are no tubercle bacilli in the sputum.

D. *Miscellaneous.*

CASE 23.—The patient, a female, seen with Dr. John Wood, had suffered for a long while from furunculosis, many boils appearing in various parts of the body. A *Staphylococcus aureus* was isolated from one of the boils. A vaccine was prepared and doses of from 50,000,000 to 100,000,000 were administered. The boils became fewer and less severe, but the improvement was not great, therefore three months after the treatment began a dose of 50,000,000 was followed three days later by a dose of 100,000,000. This produced a rise in the opsonic index to 2·5, accompanied by a rapid disappearance of the last of the boils and striking general improvement in her health.

CASE 24.—The patient, a male, aged 70 years, was seen with Dr. C. Ewart for a swelling, which after consultation with a surgeon was decided to be an inflamed omental hernia. His temperature was raised and the swelling was very tender. No organisms could be isolated from the blood, and as it was not deemed advisable to operate the patient's opsonic index to several micro-organisms was estimated, and as that to staphylococcus was low a stock vaccine of *Staphylococcus aureus* was injected. Doses of 5,000,000 and 10,000,000 were given in June, and in 18 days his temperature became normal, the swelling and tenderness had quite disappeared, and the patient got completely well.

CASE 25.—The patient, a female, aged 45 years, seen with Dr. N. J. McCaskie for severe osteo-arthritis affecting nearly every joint in her body and rendering her almost helpless, had over the sacrum a sinus which was several inches in depth and discharged pus. It had resulted from pressure in spite of careful nursing. The pus was found to contain *Staphylococcus aureus*. The opsonic index to this organism varied between 0·5 and 2·0. A vaccine was prepared. Five injections of it were given in doses of from 5,000,000 to 50,000,000 at intervals of about a week. The sinus was syringed out with peroxide, the pus gradually ceased to be discharged, and the sore improved in every way.

CASE 26.—The patient, a married woman, aged 27 years, was confined on April 11th, and was first seen by us on the 25th for general septicæmia and septic pneumonia. Cultivations from the vaginal discharge and also from the sputum showed the presence of *Bacillus coli communis* and pneumococcus. Her index to *Bacilli coli communis* was 1·7 and to pneumococcus 0·5. She was accordingly vaccinated with a vaccine from the latter, three doses of 25,000,000, 50,000,000, and 50,000,000 being used. The improvement was immediate and remarkable, for before this treatment was begun she appeared to be dying. Fourteen days after the first injection the temperature had become normal.

CASE 27.—The patient, a married woman, aged 30 years, was confined on May 22nd. She had a rigor with a temperature of 104° F. on the 25th. Thereafter the temperature fluctuated between 99° and 104° with frequent rigors until first seen on June 23rd when acute nephritis with bloody urine was present. A catheter specimen of urine grew *Staphylococcus aureus* only, and as the index to that organism was only 0·35 two doses of a vaccine prepared from this particular strain were injected. The index rose to 1·5, but the clinical condition remained unaltered. In the meantime *Bacillus coli communis* had been isolated from the vaginal discharge and a vaccine prepared. On July 2nd and 5th 5,000,000, on the 7th 2,000,000, and on the 10th 10,000,000 of coli vaccine were injected. The response was immediate and by July 12th the temperature had returned to normal, and the patient made an uninterrupted recovery and now a year since remains in excellent health.

CASE 28.—The patient was a married woman, aged 20 years. This was a severe case of puerperal septicæmia. She was confined on Dec. 7th. She had a rigor on the 9th. On the following day the uterus was cleared out under an anæsthetic. On the next day large numbers of streptococci were found in the blood. Antistreptococcic serum was administered but proved useless. A vaccine was therefore prepared and injections, regulated by the movements of the opsonic index, were given during the next 11 days, at the end of which time the temperature had fallen to 100° F. The patient had improved considerably, the streptococci had disappeared from the blood, and the only sign of infection now remaining was a definite area of parametritis in the right fornix. Three days later the temperature again rose, and there were definite signs of septic pneumonia; no pus could be detected; the patient's strength gradually failed and she died. (See Chart 2.)

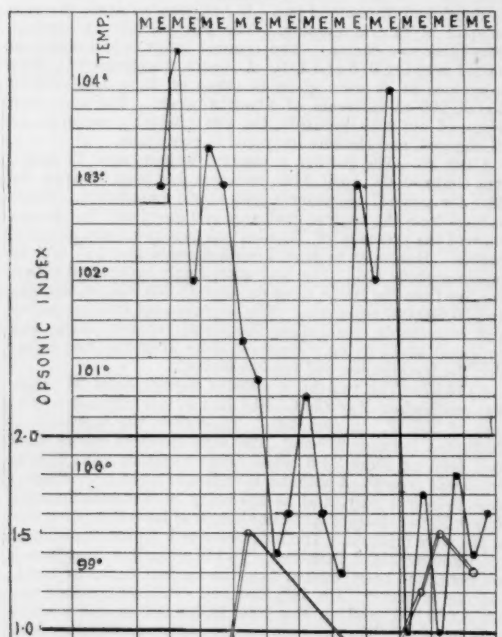
CASE 29.—The patient, a muscular young man, aged 27 years, had suffered for many years from acne pustulosa, which when he was first seen in May, 1908, completely covered the chest and neck. The face was but little affected. *Staphylococcus albus* was isolated from the pustules and a vaccine was prepared from it. During the next two months six doses of vaccine, commencing with 200,000,000 and gradually increasing to 1,000,000,000 were administered. The response to these injections was most striking, and when the patient left England in the beginning of July the chest was completely clear, the back practically

clear, and all of the scar tissues remaining from previous attacks were clearly undergoing absorption.

Summarising Remarks.

It will be seen that the first four of the cases of disease of the genito-urinary system were examples of gonorrhœal arthritis, and when we remember how intractable this complaint usually is it will, we are sure, be conceded that our cases did exceedingly well with vaccine treatment. The benefit which followed was so rapid that it was difficult to doubt that it was due to the vaccine. In the remaining six cases of genito-urinary infection the *Bacillus coli communis* was found in the urine. In Case 5 the patient was desperately ill when seen, and had been ill so long that it appeared to

CHART 2.



Case 28. Streptococcus longus infection. The double line denotes the opsonic index.

us clear that the vaccine treatment saved her life, and it is of great interest to observe how quickly improvement followed the first injection. Case 6 was very ill, and had had considerable pyrexia for over three weeks; yet two days after the first injection of coli vaccine the temperature was normal. He was treated with vaccines prepared from both micro-organisms found in his urine, but the *Bacillus coli communis* was probably the more active for harm, for it was after the injection of this that the temperature at once fell. Case 7 was a mild case of cystitis, but it is of interest that she benefited in spite of her extreme age. Case 8 did extremely well in spite of the long duration of the cystitis. In Cases 9 and 10 the vaccine treatment appeared to do no good. Why this was so in Case 9 is not quite clear, but it is to be noted that although her urine contained enormous quantities of the colon bacillus there was no pus, so that she can hardly be said to have had cystitis or pyelitis in the ordinary sense of the terms. Case 10 was so ill from his heart disease that he died before any conclusions could be drawn as to the efficacy of the treatment. Therefore out of ten genito-urinary cases in the four due to the gonococcus the improvement was rapid after vaccine treatment, and of six in which *Bacillus coli communis* was the cause of the symptoms from which the patient suffered four did extremely well, and in two cases (viz., 5 and 6) the treatment in our opinion saved the patient's life.

Turning next to the alimentary cases, Case 11, in which the severe attacks of dyspepsia accompanied by fever were associated with and apparently due to *Bacillus coli communis* in the stomach, was very remarkable. Although an occasional colon bacillus may be found in stomach contents, yet in this patient a loopful of the stomach washing contained millions of *Bacillus coli communis* in pure culture, and it would appear that this case is an example of a hitherto unrecorded cause of severe dyspepsia. We may mention that we sought for these bacilli in another case of unusual dyspepsia, but without finding them. That they were the cause of the dyspepsia in Case 11 appears extremely likely from the fact that as the patient improved under the vaccine treatment these bacilli almost completely disappeared from the stomach contents, and that this treatment helped her very considerably appears plain; no previous treatment had benefited her at all. The remaining three gastro-intestinal cases were all examples of ulcerative colitis, in which *Bacillus coli communis* was found in the fæces. Whatever may have been the original cause of the ulcerative colitis, that this bacillus was, when we saw the patients, the actual cause of the chronic inflammation of the large bowel is highly probable, for in each case the patient's blood contained specific agglutinins, easily demonstrated in high dilutions, against the particular *Bacillus coli communis* which we recovered from the fæces and utilised in the preparation of each vaccine. Moreover, in each case the opsonic index to the *Bacillus coli communis* recovered from the fæces showed remarkable variations from day to day, ranging from 0·5 to 2·5. These three cases encourage us to hope that in the future much good may follow the treatment of this intractable disease by vaccines, especially if combined with milk soured with lacto-bacilline, and perhaps the administration of cyllin.

Eight cases fall under the heading of empyemata and subdiaphragmatic abscesses, and we are well aware that both these disorders often recover without vaccines, but in Case 15 the diminution of the expectoration, which had lasted many months, was so prompt after the giving of vaccines that it appeared to be due to them. The same was true of Cases 16 and 17, 19 and 20, and our impression derived from these eight cases is that the healing of these abscesses, usually so tedious, can often be accelerated by the administration of the appropriate vaccine. The only case in which it appeared to do no good was Case 22.

Among the miscellaneous cases only Nos. 26 and 27 call for comment. No. 26 had very severe puerperal septicæmia with a large amount of septic pneumonia. She was so near death's door before the vaccine treatment was commenced that our strong impression is that it saved her life, and the same is true of No. 27; until the vaccine treatment was adopted her temperature had been raised for six weeks and she had remained consistently very ill; after vaccination the temperature fell and she improved in every way. In all the cases recorded in this paper, unless otherwise stated, the vaccine treatment was the only special treatment adopted.

We have given brief details of each case occurring since Jan. 1st, 1908, in which we have employed vaccines, recording failures as well as successes, in order that those who are present may form their own conclusions. For our own part, we believe that in not one of these 29 cases did the vaccines do any harm, and in the great majority it appeared to us that distinct benefit followed from them; in some, indeed, they, in our opinion, saved the patient's life.

INCORPORATED INSTITUTE OF HYGIENE.—A conference on "The Medical Inspection and Treatment of School Children" will be held at the Institute of Hygiene on June 21st. It is intended specially to consider the problem of "How to deal with defective children," and it is stated that a number of prominent medical men have arranged to take part in the discussion. Sir William H. Bennett, K.C.V.O., will preside.

EXPERIMENTAL EVIDENCE OF THE INFECTIVE ORIGIN OF CARCINOMA

AND OF THE TRANSMISSIBILITY OF THE DISEASE FROM THE HUMAN SUBJECT TO THE MOUSE.

BY W. FORD ROBERTSON, M.D. EDIN.

MANY experiments have been made with the object of ascertaining whether carcinoma can be transferred from the human subject to the lower animals. The general opinion is that these experiments have failed to furnish any positive evidence, although there are some records of positive results that the observers themselves certainly believed to be genuine. In 1900 Gaylord[1] asserted that in six animals (rabbits and guinea-pigs) he had succeeded in producing carcinomatous lesions by the injection of carcinomatous material from the human subject, and two years later[2] he recorded the production of multiple carcinomatous nodules in the liver of a dog as the result of the injection of peritoneal fluid from a case of malignant peritonitis. In 1902 Mayet[3] stated that in 53 white rats injected with glycerine extract of a cancer of the human breast he had obtained four lesions that were certainly cancerous and eight that were probably of the same nature.

It is possible that past failures to obtain satisfactory evidence of the transmissibility of carcinoma, apart from mere grafting of tumours upon an animal of the same species, have been due simply to the fact that the methods employed were not suitable. It may, for example, be essential to introduce the supposed protozoan organisms at a particular phase in their life cycle and in large numbers. This, in fact, is the hypothesis that I endeavoured to test in carrying out the experiments, some of the results of which I wish to record briefly in this paper.

The material used for the purposes of the experiments was kindly supplied to me by Dr. William Russell in August, 1907. It consisted of about 300 cubic centimetres of fluid from the pleural cavity of a woman suffering from malignant pleurisy, secondary to mammary carcinoma, and of about 500 cubic centimetres of fluid from the peritoneal cavity of a patient with malignant peritonitis. The flasks were incubated at 37° C. and the fluid remained sterile as regards bacteria.

The experiments were carried out upon mice and have been fully controlled by the observation of a much larger number of animals of the same stock kept under similar conditions. During the past three years this stock has consisted of from 60 to 80 mice, among which there has always been a considerable proportion of aged animals. None of these mice have developed external tumours. I have examined over 60 mice that have either died in the course of being subjected to ordinary virulence tests, or have been found dead in their cages, and I have not been able to observe any internal carcinomatous lesions. Among these animals a sufficient number to form a satisfactory control series were of ages not less than those of the mice upon which the experiments were made. Three separate experiments were carried out.

Experiment 1.—Six mice were each injected in the abdominal wall with about one cubic centimetre of the fluid (incubated for about two months) from the case of malignant peritonitis. The results of the experiment were negative as regards the development of tumours.

Experiment 2.—Five mice (a mother and four suckling young) were fed on one occasion with about five cubic centimetres of similar fluid from the case of malignant peritonitis. The results of this experiment were also negative.

Experiment 3.—30 mice of ages ranging from three to 12 months were fed with about 20 cubic centimetres of the fluid from the pleural cavity of the case of malignant pleurisy. This fluid had been incubated at 37° C. for seven weeks. On the following day they were similarly given fluid (incubated for about nine weeks) from the case of malignant peritonitis. In the course of the succeeding five to 14 months seven of these mice developed carcinomatous tumours—namely, three of the mammary gland, two of the lung, one of the testicle, and one of the uterus. In addition to these tumours there were, in two other cases, fatal lesions of the stomach and liver, which were probably, but not certainly, malignant growths. Another mouse, one of 13 young born in the cages in the course of this experiment, also developed a large carcinoma of the breast which caused its death.

Mouse No. 1.—A small tumour was observed in the flank five months after the feeding. It grew rapidly and the animal died one month later. The tumour measured 23 millimetres in diameter. It has the structure of an adeno-carcinoma (Fig. 1).

Mouse No. 2.—A tumour was observed in the left breast ten months after the feeding. It rapidly increased in size and the animal died two months later. The tumour was 25 millimetres in diameter. It has also the structure of an adeno-carcinoma but is denser than the preceding (Fig. 2).

Mouse No. 3.—The animal died a little more than a year after the commencement of the experiment. Some weeks previously a small tumour of the breast was observed. On the death of the animal this tumour measured 12 millimetres in diameter. It also has the structure of an adeno-carcinoma (Fig. 3).

Mouse No. 4.—The animal died about nine months after the commencement of the experiment. On examination there was found a firm whitish nodule projecting slightly from the anterior surface of the right lung. This nodule measured 4·5 millimetres in diameter. It is composed of large epithelial cells (Fig. 4), which at the margin can be seen to be invading the neighbouring lung tissue.

Mouse No. 5.—This mouse died nearly 14 months after the feeding. A dense whitish nodule, measuring 6·5 millimetres in diameter, was found in the right lung. This growth consists of large epithelial cells arranged for the most part in columns (Fig. 5). It presents evidence of rapidly infiltrating the neighbouring lung tissue.

Mouse No. 6.—The animal died 11 months after the commencement of the experiment. It was found to have a large solid tumour of the right testicle, measuring 14 millimetres in diameter. This had evidently pressed upon the large intestine and caused obstruction. The tumour consists throughout of large epithelial cells (Fig. 6).

Mouse No. 7.—This animal was killed ten weeks after the commencement of the experiment when it seemed moribund. For some days previously it had been observed to be ill and the abdomen was much swollen. On post-mortem examination there was found to be very great general increase of the subperitoneal fat. Both horns of the uterus were much thickened, being at least 12 times the diameter of the normal organ. On microscopical examination the muscular and submucous coats are seen to be greatly thickened. The latter is extended in the form of numerous polypoid projections covered by proliferating surface epithelium. Throughout the submucosa there are larger or smaller masses of epithelial cells, for the most part presenting a glandular arrangement. Some may be inclined to regard the lesion in this case as simply an endometritis. For my own part, on account of the irregularity and evident rapidity of the epithelial proliferation, the occurrence of local invasion of the muscular coat, and the absence of inflammatory exudation, I am satisfied that the condition is carcinomatous.

The mammary tumour which developed in the young mouse born in one of the cages some months after the commencement of this experiment is 15 millimetres in diameter, and has the histological characters of an adeno-carcinoma. This tumour is not included in the positive cases.

In this experiment seven out of 30 mice developed carcinomatous tumours. As the control animals have not shown any similar tumours, and as the only difference in the treatment of the two series was that the 30 mice were fed with incubated carcinomatous material from the human subject, I infer that the epithelial tumours were determined by some agent contained in this carcinomatous material. As none of the 11 animals injected or fed with the fluid from the case of malignant peritonitis developed carcinomatous growths, it seems probable that this agent was contained in the fluid from the case of malignant pleurisy. It was certainly unfortunate that in the third experiment the animals were fed with material from both cases of human

[1] Third Annual Report of the New York State Pathological Laboratory of the University of Buffalo, 1901.
[2] Fourth Annual Report of the Work of the Cancer Laboratory of the New York State Board of Health, 1903.
[3] Gazette Hebdomadaire de Médecine et de Chirurgie, No. 6, 1902.

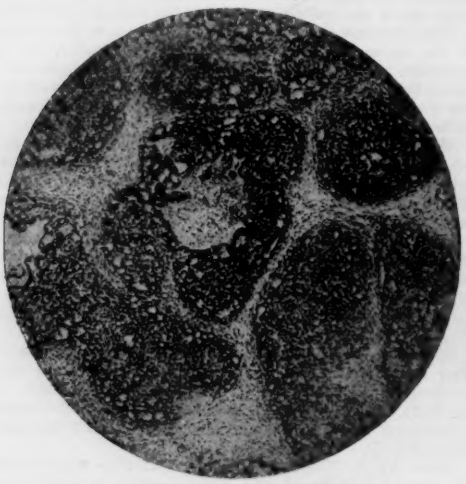


FIG. 1.—Section of tumour of mouse No. 1. × 50.

FIG. 2.—Section of tumour of mouse No. 2. × 50.

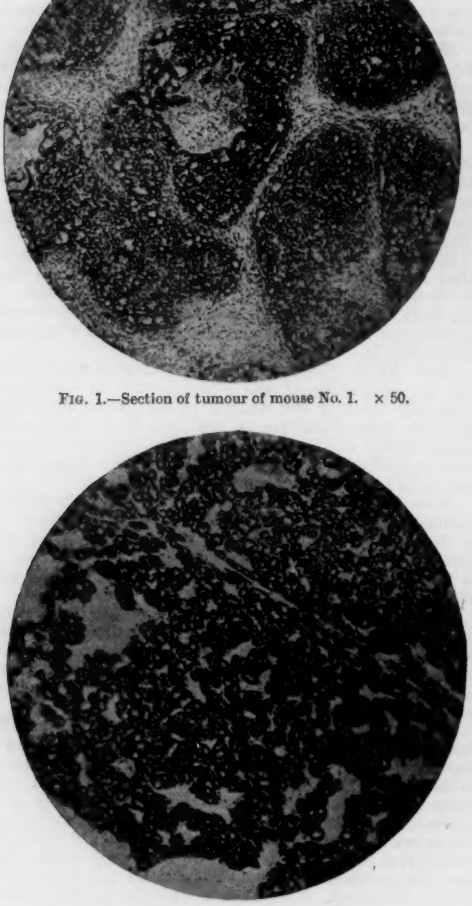


FIG. 3.—Section of tumour of mouse No. 3. × 50.

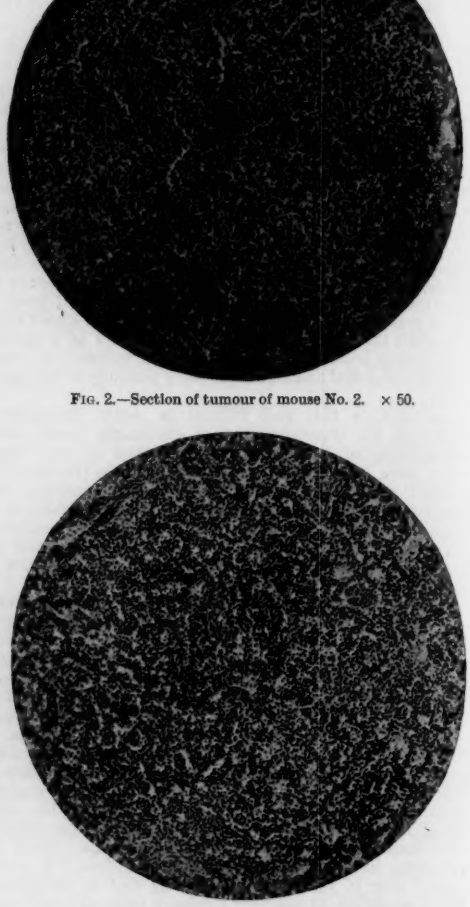


FIG. 4.—Section of tumour of mouse No. 4. × 50.

FIG. 5.—Section of tumour of mouse No. 5. × 50.

FIG. 6.—Section of tumour of mouse No. 6. × 50.

carcinoma. But this circumstance cannot to any great extent detract from the significance of the results. These three experiments were meant to be merely of a preliminary nature. It was my intention to make other observations with similar material incubated for various periods. But until quite recently I have been unable to obtain any further supply of carcinomatous fluid. Many more experiments of a similar kind are needed, and it is largely with the purpose of commending such work to others who have the necessary time and facilities, which I have not, that these initial observations are now recorded. There is probably for the production of tumours an optimum period of incubation of the carcinomatous fluid, and this will, I think, be found to be shorter than the time in my experiments.

On the ground of the experimental results that I have recorded it could, I think with good reason, be contended that the pathogenic agent transferred from the human subject to the mouse was not merely a chemical substance but must have been a living virus. This contention has, however, a still stronger support. It is borne out by abundant evidence of a direct character. From one of the mammary tumours occurring in these mice I made several cultures upon non-nutrient agar-gelatin, similar to those described some years ago in a paper by Dr. Henry Wade and myself.[4] These cultures have been studied in section by means of the ammonio-silver process by Dr. M. C. W. Young, who has been able to demonstrate in them certain morphologically characteristic forms identical with those already observed by us in malignant tumours from the human subject and more recently in one of the original Jensen mouse tumours. Some of these forms have also been demonstrated in these experimental tumours, as well as in a mammary tumour produced in a previously healthy mouse by inoculation of one of these growths. Our more recent observations, some of the results of which were demonstrated on Feb. 26th at a meeting of the Edinburgh branch of the British Medical Association, lead to the conclusion that a group of protozoan organisms, to be classed among the mycetozoa and including very numerous pathogenic species, is associated with tumour growth, just as very numerous pathogenic species of schizomycetes are associated with inflammation. The main phases in a complicated life cycle have now been demonstrated in sections of tumours, in sections of agar cultures from tumours, and in films of the centrifuge deposit from fluid from cases of malignant pleurisy secondary to carcinoma of the breast. The phases recognised include forms with flagella, sporoblasts and their residua, nucleated forms, some of which have been observed in mitosis, and certain other remarkable bodies of characteristic appearance which almost certainly represent gametes.

Edinburgh.

[4] THE LANCET, Jan. 28th, 1905, p. 215.

A NOTE ON

THE RECURRENCE OF VESICAL CALCULI AFTER REMOVAL IN A SERIES OF 160 OPERATIONS.

BY F. A. SOUTHAM, M.B. OXON., F.R.C.S. ENG.,

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HAVING recently performed lithotrity (or litholapaxy, as the operation is now termed) for the sixth time within a period of 16 years upon the same patient, a male, now aged 76 years, the frequent recurrence of the calculi in the bladder naturally suggests the question whether their presence there has been due to the descent of more calculi from the kidney or to small fragments left in the bladder after operation, either of which may form the nuclei of fresh vesical calculi.

In this case the patient had undergone the operation of perineal (lateral) lithotomy for the removal of a stone 15 years before he came under my care for the first crushing operation, and during this interval he had remained free from any symptoms. The six crushing operations which I performed upon him were separated by successive intervals of one year, ten years, two years, three years, and one year, the calculi consisting of uric acid, and in each instance being considerably under an inch in diameter. As the first crushing operation occurred 15 years after a calculus had been removed by lithotomy, there must on the first recurrence have certainly been a descent of a fresh calculus from the kidney; and, as an interval of ten years elapsed between the second and third crushings, it is not probable that a fragment left after the second crushing operation formed the nucleus of the stone removed so many years subsequently. It would appear, therefore, that provided the bladder is thoroughly cleared of the fragments, as is now possible owing to the improvements during recent years in the technique of the crushing operation, a recurrence after lithotrity is generally due to the descent of a fresh calculus from the kidney.

The tendency to a recurring formation of calculi in the kidney was well illustrated in the case of a patient, aged 20 years, upon whom I performed lithotrity some years ago, for he brought with him a collection of 41 uric acid calculi, some measuring a quarter of an inch in diameter, which he had from time to time previously passed per urethram. In six patients I have twice performed lithotomy, and in one of these the calculus again recurred, necessitating a further operation. In two other patients, after removing calculi from the bladder I subsequently performed nephro-lithotomy, on each occasion removing a calculus from the kidney.

Having up to the present time operated on 160 occasions for the removal of vesical calculi, the following analysis of the cases shows that recurrence is as common in male patients after a cutting as after a crushing operation; in fact, in my experience it has been practically the same—viz., 7 per cent.

Summary of 160 Operations for Calculus Vesicæ.

—	Nature of operation.	No. of operations.	No. of patients.	No. of patients in whom calculi recurred.	Percentage of recurrences.
Males	Lithotrity	61	56	4	7·1
	Lithotomy	89	83	6	7·2
Females	Vaginal lithotomy ...	1	1	0	—
	Dilatation of urethra	9	9	0	—

In ten male patients the calculi recurred after operation—viz., in four after lithotrity and in six after lithotomy (17 lateral and 72 suprapubic operations). One patient (already mentioned) was operated upon six times, another patient four times, and the remaining patients each twice. The longest interval between any two successive operations was 19 years, this period intervening between the operations of lateral and suprapubic lithotomy performed upon a patient aged 53 years at the first operation, and 72 years at the second. Of the patients in whom a recurrence took place, one was in his fiftieth year and the others were all over 56 years of age when the first operation was performed; four patients were aged respectively 72, 72, 76, and 79 years.

No instance of recurrence was met with in younger subjects, of whom 27 were under ten years of age, and of these 14 were treated by lithotrity.

From a consideration of the results in my series of cases, it would therefore appear that a recurrence of calculi after operation is relatively not more common after lithotrity than after lithotomy, and when it does take place it is in both instances probably due to the descent of a fresh calculus from the kidney and its retention in the bladder. The percentage of recurrences after lithotrity given in the above summary—viz., 7·1 per cent.—is somewhat less than that of other surgeons. Sir H. Thompson[1] met with a recurrence in 75 patients out of a total of 600 cases = 12·5 per cent.; Cadge[2] in 18 patients out of a total of 133 cases = 13·6 per cent.; and R. Harrison[3] in 23 patients out of a total of 101 cases = 22·7 per cent. It is interesting to note that Freyer[4] in his Indian experience of lithotrity met with a recurrence in ten patients only in a series of 610 operations, which gives a much lower percentage of recurrences—viz., 1·6 per cent.

[1] Brit. Med. Jour., July 3rd, 1886.
[2] Ibid.
[3] THE LANCET, Nov. 12th, 1898, p. 1250.
[4] The Modern Treatment of Stone in the Bladder by Litholapaxy second edition, p. 56.

The more satisfactory results of lithotrity at the present day, as compared with those in the early years of the operation, are no doubt mainly owing to the fact that we now employ larger evacuating catheters, which enable us to remove the broken-up fragments from the bladder much more thoroughly than was formerly the custom.

Manchester.

PUSTULE SIMULATING ANTHRAX DUE TO ORGANISMS OF THE PROTEUS GROUP.

BY THOMAS ORR, M.D., B.SC. (PUB. HEALTH) GLASG.,
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So much doubt exists as to the possibility of organisms of the proteus group, in the absence of other organisms, causing pathogenic lesions in man that the following case is worth recording. The case is interesting not only on account of its rarity but also because the lesion presented characteristics indistinguishable from malignant pustule, for which it was mistaken and as such treated.

A butcher, 45 years of age, first noticed a small pimple on the back of his left thumb about the middle of the metacarpal bone. This slowly increased in size but showed no signs of suppurating. There was little or no pain felt and he did not complain of feverishness or of being ill. As little discomfort was experienced, he did not seek medical advice until about a fortnight after its first appearance and until it had much increased in size. When examined by Dr. William Craik, Thurnscoe, there was found a hard raised swelling of about the size of a shilling over the area mentioned. The top of the swelling was depressed or crateriform and was dark and necrotic in appearance. At the margin of the necrotic area was distinct vesiculation and the skin around for about a quarter of an inch was dusky red with a bluish tinge. There was no evidence of pus formation. The appearances were uncommon and at once suggested malignant pustule. On the day when seen the sore was treated by injecting a solution of carbolic acid into the centre and periphery. On the next day the necrotic part had extended and the skin was inflamed to a greater extent. A crucial incision was therefore made and salicylic acid was dusted into the wound. On the following day it was thought advisable to excise the pustule on the assumption that it was due to the anthrax bacillus. Before excision a little of the serum exuding from the previous day's incision was collected in a glass tube for bacteriological examination. Within ten days after excision a small secondary papule developed at the margin of the wound. This was incised and dusted with salicylic acid. In a few days the inflammation began to subside and the wound slowly healed.

Bacteriological Examination.

1. *Serum from incised wound.*—Films made from the serum and stained failed to show any organisms. A loopful spread on an agar plate gave a few white colonies which were found to be of *Staphylococcus albus*. The presence of these organisms was probably due to contamination from the skin owing to want of aseptic precautions in collection.

2. *Excised pustule.*—The pustule on excision was put into sterile distilled water and next day examined. Films made from the fluid exuding from the freshly cut surface of the tissue and stained showed the presence of small bacilli with rounded ends. These were found both singly and in small groups and retained the stain by Gram's method. The surface of the tissue was seared with a hot iron and incised with a sterile knife. The fluid exuding from the cut surface was spread on nutrient agar plates. After 24 hours' incubation at 37° C. there were found numerous small colonies of two different types. Both types of colonies occurred in about equal numbers and were found to be composed of Gram-staining bacilli to be described later. Sections of the tumour examined microscopically showed areas of necrosis surrounded by areas of leucocyte infiltration, the leucocytes being large mononuclears. In the zone between these areas of necrosis and infiltration were found many Gram-staining organisms. These were bacillary in form, irregular in size and in shape, many swollen at the ends or in the middle, and some large and spherical.

3 and 4. *Specimens from the secondary papule.*—Two sterile cotton-wool swabs were rubbed in the centre of the secondary papule and submitted for bacteriological examination. These two specimens were taken on different days. Agar plates were smeared with the swabs, and after 24 hours' incubation they showed two kinds of colonies (A and B) similar to those isolated from specimen 2. These also were found to be composed of small Gram-staining bacilli.

Thus, from specimens 2, 3, and 4 two kinds of organisms were isolated. In their morphological and biological characters they belong to the proteus group. Both organisms were very motile and non-sporing, and retained the stain by Gram's method. Both occurred as small slender rods with rounded ends, sometimes in chains. B was often arranged end to end in pairs and was slightly thicker than A. In old cultures both showed a variety of shapes; some of the bacilli presented irregular forms with swollen ends. On agar slopes the growths of both organisms were somewhat similar, being greyish-white and glistening or slimy, but A slightly more opaque than B. On agar plates A occurred as small greyish-white opaque glistening colonies with a regular margin; B showed colonies each of which had an opaque greyish-white centre and a thin transparent margin, the transparent margin being much broader than the opaque centre. A liquefied rapidly, a deep saucer-shaped hollow of liquefaction being found in the gelatine stab in 72 hours, while B liquefied much more slowly, in seven days a shallow cup of liquefaction being formed. Both produced acid and gas in glucose and saccharose but not in lactose broth. A corresponds in microscopical and cultural characters with *Proteus vulgaris* (Hauser), while B presents characteristics similar to *Proteus mirabilis* (Hauser) as described by Lehmann and Neumann. It would thus appear that the sore was caused by these two organisms belonging to the proteus group, *Proteus vulgaris* (Hauser) and *Proteus mirabilis* (Hauser).

Although such infection by these organisms is unusual, it should not be unexpected when the man's version of the origin of the sore is considered. He stated that he had got in his thumb some poisonous material from bags sent out by hide and refuse dealers. These, he says, are sometimes very dirty and bad-smelling. They are used again and again without cleaning, passing from one butcher to another. In these foul-smelling bags, used for collecting fat and bones often in a putrefying condition, large numbers of organisms belonging to the proteus group are certain to be present.

Wakefield.

SUDDEN FAILURE OF RESPIRATION RESTORED BY ARTIFICIAL MEANS,

OCCURRING DURING THE COURSE OF AN ACUTE PNEUMONIA COMPLICATED BY COMA OF URÆMIC ORIGIN.

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AND
JOHN MORISON, M.B., C.M. EDIN.

THE chief points of interest in the following case are (1) the sudden failure of respiration, restored by artificial respiratory movements; and (2) the rapid progress of the fatal symptoms.

The patient was a married man aged 40 years. He gave a previous history of some bone trouble in early life which affected his left hip and knee joints and one or two ribs on the left side; probably necrosis of bone with separation and protrusion of fragments. For three days before the onset of his fatal illness he complained of headache. On the fourth day (Feb. 10th, 1909) he was seen by Dr. Morison, when he still complained of headache and sleeplessness. The temperature was 102° F., the pulse was 100 and of moderate tension, and the tongue was furred, moist, and glutinous. There was slight cough, and the respirations were increased in frequency. Examination of the chest revealed a small area of dulness at the left base, and on auscultation there were prolonged expiration and moist crepitations over the area of

dulness. The urine was clear, but was not examined for albumin. At 6 A.M. on Feb. 11th the following condition was noted. The patient had a restless night, with very little sleep, and complained of severe headache. The temperature was 100° and the pulse-rate was 100. He was not at all drowsy. The urine passed during the night had been inadvertently thrown away. At 9 A.M. the patient was sleeping heavily, with an inclination to stupor, but as he had had a veronal powder (seven and a half grains) the night before little notice was taken of this. The pulse was 120 and the respirations had become more rapid. At 10.30 A.M. he was comatose; the pupils were moderately dilated, there being neither light nor conjunctival reflex; the respirations were laboured and over 50 per minute, and the pulse was 160, dicrotic, and the impulse sharp. There were moist sounds all over the right lung, especially at the base anteriorly. The heart showed a regular heaving apex impulse, the temperature was 106°, and the surface of the body was warm and inclined to sweat. A diagnosis of commencing pneumonia was made. The comatose condition was looked upon as being of uræmic origin, and vigorous treatment was commenced; one-thirtieth of a grain of strychnine was injected subcutaneously and oxygen was administered continuously. An ice cap was applied to the head and the surface of the body was sponged with ice-cold cloths. The temperature fell to 104° and remained at that level for some time, with a tendency to rise to 105° when sponging was relaxed. At 11.30 the respiration suddenly and unaccountably failed, the face became deeply cyanosed, and for about 20 seconds the patient remained in this condition; the pulse continued to beat vigorously, and artificial respiration was resorted to, not with any definite hope of the patient resuming breathing but more as a matter of routine and, in view of the strong cardiac action maintained for a period of seconds. After a few seconds of vigorous handling the respiration was gradually resumed and restored to its former rhythm. The temperature remained high. The patient showed no signs of improvement, so at 12 midday the median basilic vein was opened; the bleeding was not satisfactory, about 10 ounces of dark venous blood being removed. The immediate effect of the bleeding, however, was satisfactory; the patient's colour improved, his respirations became more regular and less rapid, but the coma continued. At 7 P.M. a pint and a half of blood-stained urine was removed from the bladder and when examined it was found to contain albumin in large quantity and fresh blood. The specific gravity of the urine was 1020; at this stage the respirations were about 48 and the pulse about 140. The patient continued in the same condition until about 8 P.M., when the symptoms deepened, and he gradually sank, dying at 9 o'clock on the same evening.

The case is instructive from several points of view. The rapid progress of the grave symptoms left but little time to do anything for the patient.

The question of diagnosis naturally was the most important point for immediate consideration. A patient, presumably well a few days before, is suddenly taken with an inflammatory attack, a rising temperature, rapid breathing with physical signs of pneumonia, and a rapidly advancing coma. Obviously, the pneumonia symptoms were not sufficient to account for the rapid collapse of the patient. The conditions that suggested themselves to our minds were uræmic coma, diabetic coma, or poisoning. The urine on the previous evening had been clear, no suspicion of blood being present. Uræmic poisoning as the cause of the coma was suggested (in addition to the blood in the urine) by the headache which had persisted for several days. The previous history of the patient, who suffered from some obscure eye troubles accompanied by headache without any obvious error of refraction, also gives support to the possibility of uræmic poisoning. It is a matter of regret that no post-mortem examination could be made in this case. The history of the case was quite unlike that of diabetic coma. The possibility of poisoning was suggested by the presence of a small bottle of chlorodyne, half emptied, in the bedroom; the condition of the pupils negatived poisoning by opium. The provisional diagnosis of pneumonia complicated by uræmic coma seems to be the most satisfactory.

The treatment resorted to undoubtedly prolonged the patient's life—oxygen relieved the cyanosis, ice reduced the temperature, and the effect of the unsatisfactory bleeding certainly supported the view that in similar and less severe cases this method of treatment is decidedly useful.

The most startling feature of the case was the sudden failure of respiration; this, in the experience of both of us, was unique. We have seen as sudden failure in anæsthesia cases, but never during the course of an acute and rapid illness such as we had to deal with. The patient was to all appearances dead when artificial respiration was resorted to, and we shall not readily forget the sudden stoppage and the slow return of respiration under artificial respiratory movements.

Obviously in such severe cases there is small chance of doing much for the patient. The experience gained in this case strengthens our hands in the consideration of future, and let us hope less grave, conditions. In view of the very stinted bleeding from the median basilic vein it might be better to open the external jugular, and so directly relieve the over-gorged central circulation. Oxygen should be used freely, and subcutaneous injection of fresh saline solution might be useful in relieving the condition.

Highgate, N.

A TROPICAL FORM OF ADENITIS APPARENTLY DUE TO AN AS YET UNRECOGNISED ORGANISM.

BY R. LEONARD LEY, M.B. CANTAB., M.R.C.S. ENG., L.R.C.P. LOND.

I HAVE seen recently three cases of adenitis that would come under this heading, and as I believe little is known about the disease in this country, and find no reference to it in the standard medical works or text-books, I thought the cases worth recording. What little I have learnt is from the patients themselves and from the examination of the glands from the first case. My three cases have been in soldiers who had recently served in Burma and Northern India, where apparently it is common.

CASE 1.—The patient, who had been home from Burma for one year, attended the out-patient department of St. Mary's Hospital, London, at the end of August, 1907, and was admitted under the care of Mr. S. Maynard Smith early in September. He gave the following history. He had noticed swellings in the groins about 18 months previously. These had gradually grown larger, as the result, he thought, of playing football. He had on admission masses of enlarged glands in both groins, of the size of a large closed fist. Some of the glands were soft and the individual glands moved fairly freely on one another and on the surrounding tissues. The skin over the glands was thinned, and in one place on the right side undermined. He denied all venereal disease and there were no signs of syphilis. There were no enlarged glands in other parts. The history was too long for malignant disease, primary or secondary, and there was no evidence of primary disease. Clinically the glands had all the characteristics of tubercle, and in spite of the unusual situation, the good health of the patient, and the absence of any other tuberculous lesion that diagnosis, *faute de mieux*, was made. The glands were removed, and on cutting into them after removal they were found strongly to resemble tuberculous gland. Some of the glands were of the size of pigeons' eggs and were riddled with foci of caseous material which was of a greenish-yellow colour and was of softer consistency than that usually found in tuberculous glands. The colour, however, was the main point of difference, being very unlike the creamy-white appearance of a broken-down tuberculous gland. The glands were examined in the pathological laboratory of the hospital, and when examined microscopically the changes found were quite unlike those found in tuberculous adenitis; there were none of the characteristic tubercles with giant cells, and in spite of repeated attempts, no tubercle bacilli or any other organism could be stained. It seemed certain, however, from the microscopical findings that some organism, whose staining affinities were unknown, was present, which produced a chronic inflammation going on to necrosis in much the same way as the tubercle bacillus. It was then suggested that it might be some form of tropical disease, and on questioning the patient I discovered that such a disease existed which attacked men and animals (horses and mules), that the glands in the groin were those usually attacked, and that the animals got the disease from cracks in their hoofs from

hot dry sandy soils, and the men were supposed to get it from the animals, or from sores on their feet. The wounds healed well, the patient leaving the hospital at the end of three weeks.

CASE 2.—The patient whose case I have just narrated told me when in attendance upon him that a man in the opposite bed in the same ward, who had been admitted for some nasal trouble, was an old soldier who, while serving in Burma, had apparently contracted this disease. He had been in hospital in Burma for three months with glands in both groins, which had formed abscesses and had discharged and healed alternately in spite of all treatment until they were removed. Afterwards the wounds healed perfectly and he had then sound scars in both groins. This man must, I think, have had the same disease as the patient in Case 1, as the unusual site in a healthy man excludes tuberculosis, and he denied any venereal complaint at the time; also the treatment of excision is unlikely to have been required.

CASE 3.—The third case is one which I saw in December, 1908, at Great Yarmouth, the patient being a soldier who had come home from Northern India in March of that year. He had at that time slight swelling of the left leg, but he was positive that he had no swelling in the groin. Since then he had developed swellings in the groin and at the back of the knee, which had involved the skin and had discharged. He sent for me because the leg had become more swollen and he feared blood poisoning. He had then three sores on the outer side of the ankle over the external malleolus and front of the ankle-joint. The glands in the popliteal space and in the groin were enlarged, and the skin over them was ulcerated; the ulcers had a dry base, were rather wash-leathery in appearance, and of the same greenish-yellow colour as the section of the glands in the first case. There was œdema of the lower part of the leg, which pitted on pressure. Otherwise the man was perfectly healthy and there was no history or any sign of syphilis. The places all healed in the course of a month or two under a *régime* of cleanliness and antisepsis. This patient, too, knew of the disease and its association with horses, and he thought that he had contracted it from sores obtained while in a cavalry regiment in India.

These cases seem to me to be examples of a disease which, although it is probably well known in the tropics, is little known in this country. Its characteristics seem to be: (1) that it may lie latent for a long time (months at any rate), and this being so, cases may appear to develop in this country; (2) that the glands attacked are those of the groin and popliteal space, indicating the probable route and mode of infection, namely, from sores on the feet and from an organism living in the soil; and (3) that animals contract the disease and possibly infect human beings. The two most characteristic features are the situation of the glands attacked and the chronicity. I know of no disease that combines these two symptoms. Syphilis affects the glands in the groin in the primary stage, but then there is the primary sore, and in the secondary and tertiary stages there are other signs. Tubercle bears the closest resemblance, but it rarely, if ever, attacks the inguinal or femoral glands, especially in healthy subjects. Tumours should be easily distinguished by their more rapid rate of growth and by the presence of a primary growth if the glandular mass be secondary. Septic processes are much more acute. Hodgkin's disease affects many areas, and the feel of the glands is characteristic; also they rarely break down.

These cases, with the statements made by the patients and the pathological report on the first case, go to prove the existence of a tropical disease with the above-mentioned features. I suggest as a possibility that the disease may bear the same relation to bubonic plague that cow-pox does to small-pox, and that it may in the same way as cow-pox be transmitted to man.

I am indebted to Mr. Maynard Smith for permission to make use of the notes of Case 1.

Great Yarmouth.

THE WATER-SUPPLY OF ILSINGTON (DEVON).—At a meeting of householders, parishioners, and ratepayers of Ilsington held on May 21st, it was resolved to urge the Local Government Board to sanction immediately the proposed scheme for an adequate supply of pure water, or to induce the rural district council to provide an alternative scheme.

AN INVESTIGATION OF THE ACTION OF DIGESTIVE FERMENTS AND TISSUE EXTRACTS, HYPODERMICALLY INJECTED, ON MALIGNANT TUMOURS IN MICE.

BY J. A. SHAW-MACKENZIE, M.D. LOND.

I WAS the first to employ pancreatic preparations, administered by the mouth and hypodermically in the treatment of inoperable cancer,[1] solutions of trypsin for hypodermic use originally having been prepared for me by Mr. F. W. Gamble. The trypsin treatment of carcinoma has now received extended trial. The method used has been chiefly that of hypodermic injection. Many observers, both in this country and abroad, have in the main confirmed the conclusion I arrived at some time ago—namely, that while necrotic changes may be induced by injections of trypsin in the neighbourhood of the growth this cannot be accepted as evidence of the successful treatment of cancer, while in some cases there appears to have been an advance of the disease rather than its retrocession.[2]

Without entering into the grounds that later led me to suggest a modified ferment treatment I drew attention to the possible advantages of employing a combination of ferments from pancreas, liver, and intestine,[3] and particularly to the ferment erepsin which Cohnheim first discovered in the intestinal mucous membrane, and which Vernon[4] has found to be of widespread occurrence in other tissues and organs.

A ferment of the liver independently described by von Leyden and Bergell appears to be of the same nature as Vernon's tissue erepsins; the action of these ferments is different from that of trypsin; the latter acts on the native proteins, cleaving them into simpler products, and is therefore termed proteolytic or proteoclastic; erepsin and von Leyden and Bergell's ferment acts only on proteoses and peptone, cleaving them into amino acids; they may, therefore, be termed peptolytic or peptoclastic.

The intracellular action of tissue erepsin (and of other intracellular enzymes) undoubtedly plays an important rôle in tissue metabolism and is probably a factor in the defensive processes of the body; I advanced the theory (subsequently adopted independently by von Leyden and Bergell in reference to their ferment)[5] that this agent might be deficient in cases of carcinoma.

I shall not here enter into any details regarding the clinical use of erepsin alone or in combination with other enzymes, for this method of treatment has still only reached an experimental stage; I desire here only to draw attention to an investigation I have made as to the effect hypodermic injections of intestinal extract (erepsin) alone or in combination with extracts of liver and pancreas have on inoculated malignant tumours in mice.

Having no laboratory accommodation of my own the executive committee of the Imperial Cancer Research Fund placed facilities and material at my disposal for this purpose. At the time that I suggested this investigation no therapeutical application of these additional extracts by hypodermic injection had been made. The extracts employed were mainly supplied by Messrs. Allen and Hanburys. Dr. Vernon, at my request, also very kindly sent me some preparations of liver, pancreatic and intestinal extract, and Professor S. G. Hedin (Upsala), at my request, very kindly furnished me with every information as regards the splenic extract used. In every case the injection was made subcutaneously away from the growth and not into it. The following extracts were employed.

1. Glycerine extract of duodenal and intestinal mucosa (pig). The undiluted extract is very toxic, five minims being a lethal dose for a mouse. The dose which can be borne of the diluted extract varies in individual mice, but the average for a series found to be well borne is 15 minims of extract diluted threefold with physiological saline solution; this may be briefly expressed as 15 minims of a quarter dilution

[1] THE LANCET, Jan. 14th (p. 120) and Feb. 11th (p. 386), 1905.
[2] Brit. Med. Jour., July 7th, 1906; Medical Press and Circular, July 17th, 1907.
[3] Brit. Med. Jour., March 24th, 1906.
[4] H. M. Vernon: Journal of Physiology, 1904–05.
[5] THE LANCET, July 13th, 1907, p. 122.

TABLE I.—*Treatment Commenced before Inoculation and continued after Inoculation; Injections Twice Weekly.*

Tumour.	Treatment.	Control. Average weight.	Tumours.	Progressive. Rapid.	Slow.	Disappeared or diminished considerably.	Negative to inoculation.	Died early.	Treated. Average weight.	Tumours.	Progressive. Rapid.	Slow.	Disappeared.	Negative to inoculation.	Died early.
Mammary squamous-cell carcinoma.															
Series A:—		grms.							grms.						
1. 32/21 G	Duodenal and intestinal extract (A. and H.).	17	—	1	1	2	—	3	11·1	—	2	—	7	—	2
2. 32/26 C	,,	—	—	1	3	7	—	1	—	—	—	2	1	—	8*
3. 32/28 B	Duodenal and intestinal extract (Vernon).	—	—	—	—	—	—	—	—	—	—	—	—	—	—
4. 32/26 I	,,	21·7	—	4	2	7	—	1	15·7	—	3	3	8	2	1
	Totals ...	—	28	6	6	16	—	5	—	26	5	5	16	2	11
				42·8 %		57·1 %					38·4 %		61·5 % / 64·2 %**	5·1 %†	
Series B‡:— 32/27 B	Liver extract.	—	12	1	—	11	—	—	—	12	—	1	11	—	2
Series C:—															
1. 32/30 D	Mixed ferments.	18·3	—	1	—	2	—	8	18·0	—	—	—	10	2	1
2. 32/32 A	,,	16·6	—	1	—	8	—	3	18·5	—	2	2	13	—	—
3. 32/32 C	,,	20·0	—	2	2	8	—	—	17·8	—	1	3	9	1	1
4. 32/42 C	,,	11·6	—	5	1	6	—	—	13·0	—	4	2	6	4	—
	Totals ...	—	36	9	3	24	—	11	—	52	7	7	38	7	2
				33·3%		66·6%					26·9%		73·0% / 76·2%**	11·4%†	
Series D:— 32/41 F	Splenic extract.	18·3	11	2	1	8	—	1	13·0	13	7	1	5	6	—

* Six of these occurred on day of first "charting" the growth and the series practically abandoned as in A 3.
† Of all cases. ‡ This series included many cases of early sepsis. ** Including cases negative to inoculation.

TABLE II.—*Treatment Commenced at Varying Intervals after Inoculation; Injections Twice Weekly.*

Tumour.	Treatment.	Control. Tumours.	Progressive. Rapid.	Slow.	Disappeared or diminished considerably.	Negative to inoculation.	Died early.	Treated. Tumours.	Progressive. Rapid.	Slow.	Disappeared or diminished considerably.	Negative to inoculation.	Died early.
Adeno-carcinoma.													
Series E:—													
1. 27/28 C	Mixed ferments.	—	2	—	3	—	—	—	4	—	1	—	
2. 27/30 E	,,	—	9	5	9	—	1	—	6	7	8	—	
	Totals	28	11	5	12	—	1	26	10	7	9	—	5
			57·1%		42·8%				65·3%		34·6%		
Adeno-carcinoma.													
Series F:— 63/19 D	Mixed ferments.	4	4	—	—	1	10	15	7	6	2	2	2
Medullary cancer.													
Series G:—													
1. Judic/N + 1 A	Mixed ferments.	—	17	—	1	—	1	—	7	2	—	—	1
2. Judic/N + 1 B	,,	—	6	2	1	—	1	—	5	2	1	—	
	Totals	27	23	2	2	—	2	17	12	4	1	—	2
			92·5%		7·4%				94·1%		5·8%		

in saline. No superficial ulceration is produced at the site of the injection.

2. Glycerine extract of liver. This is not so toxic and the dose used was 15 minims of a half dilution in saline. No superficial ulceration is produced at the site of injection; the extract has the disadvantage of being particularly unstable.

3. Mixed extracts of intestinal mucosa and liver. 10 minims of mixed intestinal extract (one-half dilution) plus an equal amount of liver extract (undiluted) was toxic and lethal without producing superficial ulceration. The dose tolerated of the foregoing mixture was five minims.

4. Mixed extracts of intestinal mucosa, liver, and pancreas. This is very toxic, and the superficial ulceration produced necessitated the destruction of the animals. It was, however, found that five minims of the following mixture was tolerated: equal parts of intestinal extract (one-half dilution), liver extract (undiluted), and saline solution, plus 4 per cent. of pancreatic extract (one-half dilution); the tryptic strength of the pancreatic extract was 10 grains, and the amylolytic strength five grains to the drachm (A. and H.).

5. Splenic extract (ox). The spleen was digested in water containing 0·2 per cent. of acetic acid. The dose employed was 15 minims of one-half dilution with physiological saline solution, but no toxic or ulcerative effects were produced by the same dose of the undiluted extract.

The investigation was commenced in March, 1908, and up to the end of July it seemed to afford me some ground for encouragement. For example, in one series of nine mice, which survived, although previous treatment with intestinal extract did not prevent the tumours from appearing after inoculation, two tumours grew progressively and seven became absorbed. In another series of 16 mice two were negative to inoculation, six grew, and eight became absorbed; while in a third series of 12 mice, treated with the mixed extracts of intestine, liver, and pancreas, two were negative to inoculation, three tumours grew, and these, together with seven which were positive to inoculation, practically disappeared. No conclusion was, however, permissible from these results owing to the early death of some of the treated and untreated (control) mice in the several series. Neither was any conclusive result obtained by treatment with liver extract alone, owing to its liability to undergo decomposition.

Repetition of treatment with the mixed extracts during later months has not given the same result nor confirmed the earlier hopes. For example, in one series of 16 mice four were negative to inoculation, six growths took place and six disappeared, compared with six growths out of 12 and six disappearances in the untreated controls. As regards the growths, the slight difference in favour of the treated mice is not sufficient to demonstrate a specific action, since the tendency to spontaneous absorption was also present in the controls. As regards the negative cases and absorbed growths, in favour of the treated also, it is not possible to say whether treatment assisted natural processes or not.

In the case of tumours of generally slower growth there is no evidence that any beneficial influence has been exerted, although in such cases it is more difficult to arrive at a comparative conclusion, especially as regards retardation of growth. In other observations on rapidly growing tumours without a tendency to natural absorption the treatment did not arrest their onward progress. In one series in which splenic extract was used, while six were negative to inoculation and five growths disappeared, there seemed to be increased growth, eight progressive tumours occurring in 19 mice treated, compared with three in the 12 untreated control animals. The treated mice had a smaller average weight than the untreated; this may have been a possible factor in the result.[6]

It is too early to conclude that these results are condemnatory of the whole theory of intracellular ferment action and ferment treatment in carcinoma. They refer solely to the hypodermic method of administration or to particular combinations of the extracts employed.

Tables I. and II. present in a concise manner the whole series of observations, chiefly with the mixed extracts, on squamous celled carcinoma (mammary), adeno-carcinoma, and medullary cancer in mice. Table I. shows the results in cases in which treatment was commenced previous to inoculation and continued afterwards. The small difference in favour of the treated mice in Series A and C so shown may have some significance, but does not appear to be conclusive. Table II. shows the results in which mice were treated after inoculation, and shows that the results in these therapeutical experiments must be considered negative.

Green-street, Park-lane, W.

[6] In the treated of this series a moveable lymphatic gland in the inguinal region on the side of inoculation was evident to palpation in seven (in one case bilateral) of the negative cases and absorbed growths. In the treated of Series C, No. 4, the same was noted in eight (in one case bilateral) similar cases, and in one of the untreated controls; in this series also metastas's took place, apparently in the lymphatic gland in one of the treated cases.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

LABOUR OBSTRUCTED BY A FIBROID TUMOUR; CÆSAREAN SECTION; SUPRAVAGINAL HYSTERECTOMY.

BY C. E. PURSLOW, M.D. LOND., M.R.C.P. LOND.,
HONORARY OBSTETRIC OFFICER, QUEEN'S HOSPITAL, BIRMINGHAM.

I SAW this patient in consultation with Mr. J. K. Syms at her own home at 11 P.M. on Feb. 20th last. She was 39 years of age and this was her first pregnancy. There was nothing in her previous history which pointed to the existence of a fibroid tumour. Labour pains had commenced 24 hours before I saw her, and the membranes had been ruptured ten hours. Mr. Syms on being called in at once recognised that there was a tumour obstructing labour and asked me to see the case with him.

On examining the abdomen a breech presentation could be diagnosed, and it was easy to make out that the presenting part was well above the pelvic brim; nothing could be felt of the obstructing tumour by abdominal palpation. On making a vaginal examination the pelvis was found to be occupied by a hard, somewhat uneven, tumour, which could not be displaced; the os was clearly in front of the tumour, which pressed upon the posterior vaginal wall, but by the greatest effort it was not possible to reach the cervix with the examining finger, the pelvis being completely occupied by the growth. Cæsarean section was decided upon and the patient was taken to the Queen's Hospital in a cab, and at 1 A.M. I operated.

The abdomen was opened by a median incision, and the uterus was likewise incised vertically in the middle line, and child and placenta were removed. The tumour was found to be growing from the posterior wall of the uterus low down and by a broad base of attachment. Hysterectomy seemed to be the most suitable operation, and I accordingly removed the uterus and tumour by the supravaginal (or subtotal) method, the edges of the cervix were brought together by catgut, the peritoneum of the pelvic floor was united by continuous fine silk sutures, and the abdominal wall was closed in layers.

The patient made an uninterrupted recovery. She was unable to suckle the child, as no milk was secreted; artificial feeding was used, but the child made good progress and both mother and child left the hospital in excellent condition at the end of a month.

Birmingham.

A CASE OF HERNIA THROUGH THE FORAMEN OF WINSLOW.

BY WALTER H. HAW, B.A., M.R.C.S. ENG., L.S.A. LOND.,
DISTRICT SURGEON, KNYSNA, CAPE COLONY.

THE following case, which occurred in my practice recently, is perhaps in some respects unique. According to Treves,[1] "hernia into the foramen of Winslow occurs in adults, and in men more often than in women. Eight cases at least have been recorded."

A coloured boy, aged five years, was brought to my surgery at 9 A.M. on the morning of Jan. 28th in a moribund condition, and he died within half an hour while in the

[1] System of Surgery, 1898 edition, vol. ii., p. 668.

surgery. The history was as follows. On Jan. 15th his mother had applied to me for medicine for the boy, who had shown symptoms of worms. The powders (santonin and calomel) and medicine given had apparently been followed by good effect, for on the 27th he was running about at play and appeared all right until 7 A.M. on the 28th. At this time he was suddenly seized with abdominal pain and great tenderness, and he was brought to my surgery, as stated, at 9 A.M., his death occurring half an hour later.

At the post-mortem examination it was discovered that the cæcum, the appendix, and part of the ileum lay behind the stomach, having passed through the foramen of Winslow. Reduction was impossible until the gastro-hepatic omentum containing the vessels, &c., passing to the liver was divided, when the mass was easily withdrawn. A curious part of the case was that the cæcum and appendix up to the tip of the latter were tightly packed with round worms, the appendix being about the diameter of the thumb and conical in shape. 53 large worms were removed from the cæcum and appendix. The strangulated portion was naturally deeply congested and swollen, but the rest of the small intestine was not dilated, although there was some injection of the mesenteric vessels generally.

Interesting points about this case are: (1) the age of the patient; (2) the accelerated collapse; and (3) the fact that the condition was apparently directly brought about by the presence of the worms.

Knysna, Cape Colony.

A CASE OF ACROMEGALY.

By E. P. CARMODY, L.R.C.P. LOND., M.R.C.S. ENG.

THE patient, a married woman, aged 33 years, was seen by me first on Dec. 19th, 1908. She complained of constant headaches, most marked over the forehead, and general weakness, and stated that she had been in poor health for about seven years. She had noticed enlargement of her hands and face for the last two years and had become round-shouldered. Her voice had been getting deeper and harsher. Catamenia had ceased six years ago. There were profuse sweatings at night. There was a history of rheumatic fever. Her condition was as follows. She was intelligent. She was a sallow, unhealthy-looking woman. There was enlargement of the face, especially the nose, lower jaw, and lips. The frontal region was prominent. The skin and deeper tissues all over the body were thickened but could be pinched up without difficulty. The nasal and tarsal cartilages were increased in size. The ears were leathery. The lower jaw was large, but the lower teeth met the upper teeth when the mouth was shut. The teeth were good and regular. The lips were thick and pendulous. The tongue was slightly enlarged. There was marked kyphosis in the cervico-dorsal region. The clavicles and ribs were large and unduly prominent. The lungs and heart were normal. There was marked impairment to resonance under the manubrium sterni. The thyroid gland was not enlarged, but the patient had previously been under treatment for goitre. The skin was abnormally active. The hands were increased in breadth and the fingers much thickened; the natural creases of the hand were well marked. The feet were unaffected. The larynx was large. The vision was indistinct for near objects. There was slight dyspnœa. The urine had been examined on several occasions and contained no albumin nor sugar. Mentally the patient was usually melancholy. Although intelligent at times she was not clear as to her surroundings. Her memory for recent events was bad. She suffered intermittently with insomnia.

I have treated the patient with phenazone for the headaches and have given two-grain tabloids of pituitary extract three times a day for six weeks. Up to the present there is no improvement.

Tilehurst, Berks.

PROVIDENT NURSING.—A special meeting of the council of the Charity Organisation Society will be held on June 28th, at 4.30 P.M., at Denison House, Vauxhall Bridge-road, S.W., when Miss Amy Hughes of the Queen Victoria Jubilee Nurses Institute will read a paper on Provident Nursing. Sir Alfred Lyall, G.C.I.E., K.C.B., will take the chair, and the Right Rev. the Bishop of Islington will speak.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

Treatment of Typhoid Fever with an Anti-endotoxic Serum.

A MEETING of this section was held on May 25th, Dr. NORMAN MOORE being in the chair.

Professor R. T. HEWLETT read a paper on the Treatment of Typhoid Fever with an Anti-endotoxic Serum. He said that it was generally recognised that an anti-typhoid serum prepared by the injection of the horse with cultures of the typhoid bacillus was useless in the treatment of typhoid fever. An anti-endotoxic serum had been made by the injection of the horse with typhoid cell-juice. Such a serum had an active neutralising power against both the typhoid endotoxin and the typhoid bacillus. The results of the use of this serum in nine cases of typhoid fever were detailed. The impression which had been gained so far was that several cases were benefited and that in two at least the disease was cut short by its use. Typhoid fever was, however, such a variable disease that it was extremely difficult to estimate the value of any form of treatment unless a large number of cases was available. In no instance did the serum appear to do any harm. Unfortunately, cases of typhoid fever usually only came under observation when the disease had existed for a week or longer. If the disease had existed for some time no immediate effect could be hoped for from the use of a serum, however efficient that might be. Moreover, the existence of secondary infections, which often occurred in typhoid fever, must limit the value of any serum. As regards dosage of the serum, his impression gained from those few cases was that the serum should be given freely—namely, from 10 to 20 cubic centimetres daily—until the temperature had reached the normal, and perhaps in smaller doses for a week subsequently. Another point was that the preparation of an anti-endotoxic serum was at present in the experimental stage. They did not know for how long the horse should be immunised and he was inclined to think that it was possible to over-immunise, that was the serum did not increase in potency after a certain number of doses of the typhoid endotoxin; in fact, harm might result from continuing the injection of the horse. The horse seemed to be extremely susceptible to the typhoid endotoxin and a period of eight months elapsed before a dose of 30 cubic centimetres could be given. In a second horse which he was immunising the commencing dose of toxin was 0·1 cubic centimetre, and even that small dose caused so much disturbance that it had to be repeated five times at weekly intervals before the dose could be increased. He thought it would be of interest to test whether the typhoid endotoxin would give an ophthalmic reaction. For that purpose some typhoid endotoxin was carefully prepared, so as to eliminate as far as possible extraneous substances, and dried *in vacuo*. The substance gave a marked reaction in several cases of typhoid fever. It also gave a reaction in one or two cases of other diseases, but did not give a reaction with several cases not typhoid. The interest of the observation was that the substance producing the reaction was thus shown to be an intracellular constituent of the organism.

Dr. E. W. GOODALL, of the Eastern Hospital, Homerton, read a paper detailing the results of the treatment of 26 cases of typhoid fever with the same anti-endotoxic serum. In regard to the value of the treatment he pointed out one fact which, before he treated a single patient with serum, led him not to be too sanguine as to its results. He referred to the advanced period of the disease at which the patients were in most instances sent to hospital. That was a fact which militated against any form of treatment, and was, he believed, one of the chief reasons why in his hands the bath treatment, for instance, had not achieved the excellent results obtained by other physicians. Enteric fever was a disease which varied in severity to a considerable degree within short periods of time, and the number of cases he had recorded was very small, so that it was impossible for him to speak with certainty as to the efficacy of the treatment. He could only say that it appeared to have done good

in a few cases and that it was worthy of further trial. In regard to the ophthalmic reaction in ten cases of enteric fever in which the test was applied, in five the reaction was marked and in five it was slight, whereas in ten cases in which the person tested was not affected with enteric fever in one case the reaction was very marked (a case of scarlet fever), in three (all cases of scarlet fever) it was slight, and in six (four cases of scarlet fever, one case of indefinite pyrexia, and one normal person) there was no reaction.

Mr. R. M. BRUCE of the Western Hospital, Fulham, sent a note on five cases of typhoid fever treated with the same anti-endotoxic serum. The number of cases treated was, of course, too small upon which to base any trustworthy conclusions, but his impression was that two at least were benefited by the injections, and that one case in which the temperature subsided on the seventeenth day would not improbably have run a more severe and prolonged course if the serum had not been used.

In answer to Dr. MOORE, Dr. GOODALL said that the condition of supersensitisation might last from two to five years.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION.

Rupture of the Uterus.

A MEETING of this section was held on May 13th, Dr. HERBERT R. SPENCER, the President, being in the chair.

Dr. T. W. EDEN read a paper on the Operative Treatment of Rupture of the Uterus, with an account of three cases treated by Abdominal Hysterectomy. Dr. Eden summarised the discussion on rupture of the uterus at the Obstetrical Society in 1900, introduced by Dr. H. R. Spencer, who related four cases treated by gauze packing, and advocated the use of this method in practically all cases. In 1901 Varnier recorded his experience of uterine rupture, condemned conservative treatment such as gauze packing, and advocated abdominal section for removal of the uterus in all serious cases. Dr. Eden then recounted the three following cases: 1. A case of rupture during version for transverse presentation in a II.-para, aged 29 years, at Charing Cross Hospital, on Jan. 22nd, 1905. Rupture was complete, the placenta having passed into the peritoneal cavity. The placenta was removed by hand, the peritoneal cavity douched through the rent, and an attempt made to pack the rent, which was very extensive, with gauze. 14 hours after delivery, as there was evidence of fresh internal bleeding, the abdomen was opened, and free bleeding found from the edges of the laceration, which the gauze packing entirely failed to control. The uterus was removed by the supra-vaginal method, the pelvic peritoneum was closed, and the vaginal portion of the rent was then packed from below. The patient made a good recovery. 2. A case of rupture during version with a VI.-para, aged 33 years, at Queen Charlotte's Hospital, on April 10th, 1908. She had previously been twice operated upon, the first time for retroversion, the uterus being ventrofixed; the second time for extra-uterine gestation; the pelvis was flat and "pendulous belly" was well marked. The placenta had passed into the peritoneal cavity, and the rent was complete and very extensive. Three hours after delivery the abdomen was opened, and the uterus removed by the supravaginal operation; vaginal drainage was employed and the patient made a good recovery. 3. A case of spontaneous rupture during the second stage of labour in a II.-para, aged 25 years, at Charing Cross Hospital, on Jan. 17th, 1909. After a prolonged first stage, during which the membranes remained unruptured, strong labour pains set in and the head advanced well into the pelvic cavity. The patient was then violently sick and immediately became collapsed; hæmorrhage occurred from the vagina, and on examination the head was found to have receded and could no longer be felt. Diagnosis of incomplete rupture into the left broad ligament was made, and the fœtus was extracted *per vias naturales*. A complete and very extensive rupture was then discovered; the pelvis was contracted. The abdomen was opened three hours after delivery; the left ovarian artery was torn and had retracted, while still bleeding, beneath the peritoneum above the pelvic brim. The uterus was removed by the supravaginal method and vaginal drainage was employed. The patient at first rallied after the operation, but died rather suddenly seven hours later. At the post-mortem examination fresh bleeding was found to have occurred from a tear of the bladder, which had not been noticed at the operation. In considering the general question, it was pointed out that the three risks associated with this accident are shock, hæmorrhage, and sepsis. Dr. Eden believed that deep bleeding occurred with greater frequency than had been supposed, and might be met with in both complete and incomplete rupture, although the risk was greater in the former. The hæmorrhage which immediately followed the rupture usually ceased spontaneously, but recurrent bleeding was frequent, because uterine retraction could not control it, and the bleeding might in part be extra-uterine. To control hæmorrhage was therefore an indication of the first importance. Cases of extensive incomplete rupture might be quite as serious as those of complete rupture and were attended by exactly the same risks. Abdominal section and removal of the uterus by the most rapid method possible was recommended because (1) it is the only certain way of controlling hæmorrhage; (2) the uterus has frequently been infected previous to the operation; (3) if the uterus is left and the patient recovers the risk of repeated rupture in a subsequent pregnancy is high. Laparotomy and suture of the rent had been shown to yield a higher mortality than hysterectomy, and, for the other reasons stated, was not to be recommended. In cases of extreme urgency it might be wiser, after opening the abdomen to control hæmorrhage, simply to pack the rent from above into the vagina and to remove the uterus a day or two later by the vaginal route.

Dr. A. L. H. SMITH read a paper on Rupture of the Uterus, giving details of a series of ten cases of complete rupture of the uterus, eight of which were treated in the General Lying-in Hospital, and which were the total number of examples of this accident which had occurred among 10,989 deliveries during the last 20 years. Of the ten cases nine died and one recovered. 80 per cent. of the patients were multiparæ, 20 per cent primigravidæ. The cases were divided into two classes. In the first class the rupture was due to an abnormal excitability of the uterus, resulting in a great increase in the strength and frequency of the contractions together with a premature retraction, a condition exactly similar to that produced by the administration of ergot. In the second class the rupture followed a prolonged and obstructed labour, and in some cases was possibly the result of perforation with an instrument or was due to some intra-uterine manipulation.

The PRESIDENT said that in considering the question of treatment it was to be borne in mind that, although rupture sometimes occurred spontaneously and in careful hands, it arose for the most part in bad and dirty midwifery practice, and consequently the tissues were often bruised and infected, and many would die however they were treated. He showed ten specimens of rupture from the Museum of University College Hospital. In two of the cases abdominal hysterectomy had been performed, with a fatal result in each case from shock. Only one of the ten cases was a suitable case for supra-vaginal hysterectomy. Total hysterectomy was indicated in those cases which required the removal of the uterus, but in his opinion these patients were usually too much shocked to stand removal of the uterus by the abdominal route.

Dr. C. HUBERT ROBERTS related four cases of rupture of the uterus which had come under his care. The first of these was treated by plugging the rent and she recovered. In the second and third cases the abdomen was opened and the rent sewn up with silkworm-gut sutures. One of these recovered and three years later was safely delivered of a full-term child at Queen Charlotte's Hospital. The fourth case died very soon after delivery before it was possible to attempt any treatment. As to treatment, Dr. Roberts thought no hard-and-fast rule could be adopted.

Dr. G. DRUMMOND ROBINSON stated that he had had five cases of ruptured uterus under his care. One patient died shortly after rupture had occurred. In two cases the rupture was discovered after the delivery of the child. In both of these cases gauze-packing was employed and they both recovered. In two other cases the fœtus was still in the uterus when the rupture was discovered, and abdominal hysterectomy was performed. Both patients died. Dr. Robinson was surprised that others had not alluded to this class of rupture in which the fœtus was still in the uterus, and delivery by the vagina was contra-indicated. He thought that in cases of this kind there was no option but to perform abdominal section and at the same time to remove the uterus.

Dr. J. S. FAIRBAIRN said he could speak only from a

small experience of about six cases, in which, however, the three methods of plugging, suture of the rent, and abdominal hysterectomy had been tried. He thought that there was a place for all these forms of treatment, and that what should be aimed at was some means of recognising the cases suitable for each method. He had had three cases in which no operative treatment was done, two of which made as straightforward a recovery as any uncomplicated labour case. In one of them there was a rent through the posterior wall of the uterus which admitted three fingers, but there was no bleeding, and a gauze plug was all that was required to prevent intestinal prolapse. In another case there was an extensive laceration into the left broad ligament large enough to admit the whole hand, but not communicating with the peritoneal cavity. Nothing at all was done and she made an uninterrupted recovery. A third case in which plugging was tried died in 24 hours. In the case in which hysterectomy was done the child, who had been lying transversely, had escaped into the left broad ligament, and the placenta had been extruded into the peritoneal cavity. Both child and placenta had been delivered by the outside practitioner before the patient was admitted. She was suffering profoundly from shock and was bleeding, so the abdomen was opened. The posterior layer of the broad ligament was torn into shreds, the ureter remaining as a bridge, and the uterine rent was so ragged that no other course than hysterectomy was practicable. This patient died a few hours later, as also did one mentioned by Dr. Lionel Smith, in whom partial suture of the rent and drainage were tried. These few cases exhibited such differences in symptoms that no one form of treatment would have been suitable in all.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF SURGERY.

Bier's Hyperæmia.—Post-operative Tetanus.

A MEETING of this section was held on May 7th, Mr. JOHN LENTAIGNE, the President, being in the chair.

Mr. R. ATKINSON STONEY read a paper on Bier's Method of Treatment by Hyperæmia. After mentioning the various forms of hyperæmia, he said he would confine his remarks to passive hyperæmia, produced by means of the elastic bandage and suction glasses, more especially in the treatment of septic inflammation rather than in tuberculous disease, as in the treatment of the latter type of cases his experience had been neither extensive nor promising. He described the method of applying the elastic bandage and the suction glasses, laying special stress on the necessity of not producing too great a degree of hyperæmia, as in that case serious harm might be done. He gave the following rules for the application of the bandage: (1) Place it on the limb as far from the site of the disease as convenient; (2) wind it round a broad surface of the limb to prevent local pressure and pain; (3) do not bandage with sufficient force to weaken the pulse distally; (4) no pain should be caused in the diseased part, rather any existing pain should disappear; (5) the distal part should be bright or dark red, not blue, and should be warmer than the corresponding part on the opposite limb, not colder; and (6) the bandage, for all except tuberculous cases, should be left in position for two periods of 8 to 11 hours or one period of 16 to 22 hours out of the 24. In the case of the suction glasses ordinary aseptic precautions should be observed. A glass of sufficient size should be chosen to leave a margin of one inch or more around the inflamed part or opening, to prevent strangulation or compression of the lips of the opening. Pain should not be produced. And, especially where the cup was placed over a superficial bone or firm membrane, excessive pressure should not be used for fear of sloughing of the parts. Some cases were briefly described illustrating the use of both these forms of application of passive hyperæmia in various conditions.—The PRESIDENT said he had recently been converted to the treatment for boils, but he had seen a great number of cases of tuberculous disease which had deteriorated by the treatment, and in some cases he could not satisfy himself that the dissemination of the tuberculosis had not been in some way due to it.—Mr. K. E. L. G. GUNN said he had tried the treatment in cases of knee and wrist trouble, but found it impossible to produce any degree of congestion without pain.—Mr. W. I. DE C. WHEELER confessed the same experience as Mr. Gunn, but in cases such as gonorrhœal rheumatism he did find some easing of pain and apparently some improvement.—Mr. STONEY, in reply, said the worst results had been got by Bier in the knee-joint, for some reason which he could not explain. He did not suggest the treatment in any case where better results, or quicker equal results, could be obtained by operative means. It was in tuberculous cases that the greatest difficulty was found in producing the correct degree of hyperæmia. The question of tension was difficult to deal with. It was, however, easy to understand that pain, which might be due to irritation of the nerve terminals by toxins produced by organisms, might be relieved by the congestion causing a flow of blood and lymph and producing a dilution of the toxins.

Mr. GUNN read a paper on Post-operative Tetanus.—The PRESIDENT said the paper was one of the most valuable which had been read before the Academy. He could imagine no more appalling catastrophe to happen a surgeon than to have a case, or series of cases, of post-operative tetanus. He could not help keeping to the belief that the catgut used must have been responsible. It was curious that in every case in which the catastrophe had occurred catgut had been used. It would be important to know what methods of sterilisation had been employed. He had himself been using the iodine catgut for some time, but if he was threatened by the terrible phantom of possible tetanus he would be inclined to give up catgut altogether.—Dr. KATHARINE MAGUIRE said she had been in attendance on one of the cases mentioned by Mr. Gunn. It was not a case of hysterectomy alone, but was combined with ovarian tumour, and quantities of thick catgut had been used.—Mr. A. J. BLAYNEY said it seemed difficult to get over the fact that in every single case catgut had been used. They knew the source of the catgut and the probability of its being infected, which made the conclusion of its responsibility all the more probable. The extreme virulence of the cases seemed to be at variance with the results of the bacteriological examination. The conditions inside the body were not such as would be expected to favour the growth of the bacillus; in two of the cases there was no suppuration and therefore no septic organism to prepare the way for the bacillus, and the tissues were well supplied with oxygen, which was also unfavourable to the bacillus.

SECTION OF MEDICINE.

Exhibition of Cases.—Grocco's Triangle.

A MEETING of this section was held on May 14th, Dr. W. G. SMITH, the President, being in the chair.

Dr. O'CARROLL and Dr. F. C. PURSER exhibited a case which had been diagnosed as Locomotor Ataxy. The patient was a young man, 23 years of age, married at 19, the father of two healthy children. The wife had had no miscarriages. There was a distinct history of congenital lues. About a year ago he got suddenly weak in his left leg, with a pain in his knee. Since then he had had a progressive difficulty in walking. Some two years previously he had "seen double" for a short time. His present condition was that without paralysis of any muscles he had considerable difficulty in walking and was very ataxic. The knee-jerks were absent. The pupils contracted neither to accommodation nor light. He appeared to have no loss of sensation in the limbs, but was rather slow in recognising touches on the left leg, especially from the knee down.

Dr. H. C. DRURY exhibited two cases of Hereditary Ataxia—sisters, aged 11 and 13 years, in whom the disease had been noticed about three and five years respectively. The younger was the much more advanced case. She stood fairly well with the feet apart, but could not balance at all with her eyes closed. The elder girl had sometimes a slight shaking of the hand, which was only noticeable when watching closely. There was no sensory disturbance or disturbance of the sphincters. The eye symptoms were variable. In the younger girl there was slight nystagmus, but some days it was absent altogether. In both cases there was a total loss of knee-jerks. The limbs were well nourished. The younger girl showed well-marked lateral curvature, and both feet were getting flat. She had a systolic murmur heard near the

apex; and at the base of the heart she had a loud systolic murmur when lying down, which disappeared when she sat up. The day following the observation of the latter murmur it was exactly the reverse—that is, it was absent when lying down, and present when erect; it varied from day to day. Her sister had the same. When they went to hospital they were very thin, but they had grown fatter and better in colour after a couple of months on arsenic. Dr. Drury also exhibited a case of Idiopathic Muscular Atrophy in a man, aged 24 years.

Dr. T. G. MOORHEAD read a paper on Grocco's Triangle, giving his observations on the subject for some years past.—Dr. T. P. C. KIRKPATRICK said he had looked for the sign during the past two years and had endeavoured to demonstrate it. He could sometimes demonstrate it to his own satisfaction, but he had often failed to do so to others looking on. It was in cases of small effusion that the sign was of particular value and it was in such cases that it was very difficult to elicit it.—The PRESIDENT said that, short of post-mortem evidence, some mystification hung over the subject. It took ten ounces of fluid to produce recognisable physical signs, and in cases of large effusion the sign was hardly necessary.—Dr. MOORHEAD, in reply, said he was an advocate of early removal of fluid, and endeavoured to demonstrate it. In three of the five cases in which he did not get the sign he also demonstrated fluid, but he had not been able to demonstrate the relationship between the size of the triangle and the effusion.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.

A meeting of this society was held on May 18th, Dr. W. Ward-Smith (Vice-President) being in the chair. The following specimens were exhibited:—Dr. C. F. M. Althorp: (1) Intestinal Obstruction due to Gall-stones; and (2) Tumour of Testicle.—Dr. A. Bronner: (1) Cholesteatoma of External Auditory Meatus; and (2) Papillomata removed from the Larynx.—Dr. Lockerbie: (1) Placental Polypus; and (2) Uterine Fibroid.—Dr. T. Jason Wood: (1) Ovarian Dermoid; (2) Hydrocele of Cord; (3) two specimens of Prostatic Enlargement; and (4) some varieties of Uterine Fibroid.—Dr. F. W. Eurich: (1) Specimen from case of Nitric Acid Poisoning; and (2) Thymus from a child, aged two years, weighing two ounces.—Dr. Charles Stiebel: Intrapancreatic Aneurysm.—Dr. W. Mitchell read a paper entitled "Some Tuberculous Skin Diseases." He said that the first variety, tuberculosis cutis vera, was rare and was simply an infection from within at the orifice of a mucous outlet—e.g., round the mouth in pulmonary tuberculosis. Treatment was not in this case of much use owing to the constant re-infection. The second variety, tuberculosis verrucosa, was due to infection from without and was somewhat rare. The treatment consisted in applying preparations of salicylic acid or pyrogallol, curetting, and treating with Finsen light or with x rays. The third variety, scrofuloderma, was not, strictly speaking, a primary disease of the skin, but arose from a caseating gland or bone lesion in the subcutaneous tissues. The treatment consisted in removing the original focus of the disease and applying antiseptic dressings. The fourth variety, lupus vulgaris, was a chronic cellular overgrowth due to the invasion of the skin by the tubercle bacillus. After enumerating various methods of constitutional treatment which had been tried in this disease, he said that many eminent authorities strongly advocated the use of the new tuberculin and that with regard to local measures the x ray treatment was the most successful of all.—A discussion followed.—Dr. Eurich suggested that in those cases which did not yield readily to x ray treatment tuberculin should be tried as well. Very often the combination succeeded where either treatment separately was ineffectual.—Mr. F. W. Goyder agreed with the last speaker. He was also greatly in favour of excision where possible and thought that scraping in many cases was distinctly useful.—Dr. Ward-Smith compared the treatment now with that of five years ago when he was in charge of the x ray department.—Dr. Lockerbie asked if the x ray treatment ever caused epithelioma.—Dr. Bronner said that he had been very successful with scraping combined with the application of pure formalin.—Dr. Mitchell then replied.—Dr. H. J. Campbell read a paper on the Therapeutic Uses of Alcohol. After describing the physiological action of alcohol on the various tissues and systems of the body, Dr. Campbell summed up as follows: Alcohol should be avoided in all cases of deficient elimination—e.g., kidney disease; in all cases where a pernicious habit is likely to be acquired, as in neurasthenics and women at the climacteric; in all cases of chronic nervous depression and in all conditions where prolonged mental or muscular strain has to be undertaken; and in all cases where there is a condition which is likely to recur. The drug is useful under suitable conditions of administration as a cardiac and respiratory stimulant and promoter of appetite.

UNITED SERVICES MEDICAL SOCIETY.

A meeting of this society was held on May 19th, Lieutenant-Colonel W. G. Macpherson, R.A.M.C., being in the chair.—Major H. W. Grattan, R.A.M.C., and Captain A. L. A. Webb, R.A.M.C., communicated a paper and gave a demonstration of the method of the preparation of the anti-typhoid vaccine for the army. They said that the vaccine was prepared at the Royal Army Medical College, and that during the last 12 months they had prepared and issued 40,800 double doses for the use of the army both at home and abroad. They stated that the vaccine was prepared from the broth culture of the typhoid bacillus, and demonstrated the various steps of the technique. A few of the points upon which they laid special stress were: that the culture should not be overheated (a temperature over 53° C. having been found to have a deleterious effect on the immunising properties of the vaccine), that the antiseptic (0·25 per cent. lysol) should not be added until the vaccine had cooled down, and that the vaccine should not be used later than three months from the date of manufacture. These conclusions had been arrived at as the result of experimental work on the protective substances found in the blood of men and animals inoculated with vaccines prepared at different temperatures and of different ages. They quoted the most recent statistics available, which had been compiled by Brevet-Lieutenant-Colonel W. B. Leishman, R.A.M.C., and published in the February number of the *Journal of the Royal Army Medical Corps*. The total strength of the 16 units under observation was 12,083; of these 5473 were inoculated, amongst whom 21 cases of enteric fever occurred with two deaths. The remaining 6610 non-inoculated men served as a control, amongst whom occurred no less than 187 cases of enteric fever with 26 deaths.

MEDICO-LEGAL SOCIETY.

A meeting of this society was held on May 25th, Dr. J. Scott being in the chair.—Dr. Charles A. Mercier read a brief note on the recent case of Rex *v.* Governor of Stafford Prison (*ex parte* Emery), in which a deaf mute accused of a felony was held by the Divisional Court unable to plead and was ordered to be detained as non-sane.—Mr. S. R. C. Bosanquet, Dr. F. J. Smith, and Dr. S. B. Atkinson joined in the discussion.—Dr. T. Claye Shaw followed with a paper entitled "On a Prominent Motive in Murder," taking the "lust for blood" as his theme.—There also spoke Earl Russell, Mr. H. Sweeney, Dr. Mercier, and Dr. W. A. Brend.—The following proposition was moved by Dr. Mercier and carried:—

That in the opinion of this society it is urgently necessary that legislation to amend the Inebriates Act should be introduced without delay.

The honorary secretaries were deputed to bring the society's resolution to the notice of the proper authorities.—The annual meeting and dinner of the society will take place at the Holborn Restaurant on July 13th, when the Hon. Mr. Justice Walton, the President, will take the chair.

MEDICAL MOTORISTS AND THE BUDGET.

On May 25th Mr. C. B. Lockwood, of St. Bartholomew's Hospital, occupied the chair at a special meeting of the Motor Union Committee of Medical Motorists held at the offices of the union to consider the Budget proposals of the Chancellor of the Exchequer in so far as they affect members of the medical profession using motor cars. There was a representative attendance of medical men, members having travelled from the North and West of England in order to be present at the meeting. The committee resolved that the motor-car has now become an absolute necessity to a medical practitioner, who is, therefore, entitled to make a special claim for abatement. It was resolved to approach the Chancellor of the Exchequer with a view to securing a rebate of 1½*d.* per gallon on petrol used by medical men. A letter was read from Mr. W. Joynson Hicks, M.P. (chairman of the Motor Union), stating that the Chancellor had agreed to receive a deputation on the matter.

Reviews and Notices of Books.

The Collected Papers of Joseph, Baron Lister, Member of the Order of Merit, Fellow and sometime President of the Royal Society, Knight Grand Cross of the Danish Order of the Danebrog, Knight of the Prussian Order pour le Mérite, Associé Étranger de l'Institut de France, &c. In two volumes. Vol. I., pp. 410; Vol. II., pp. 552. Oxford: At the Clarendon Press. 1908. Price £2 2*s.* each volume.

IN many foreign universities, especially in Germany, it is the custom to honour the jubilee of a professor or his retirement from his post by the publication of a "Festschrift"; this usually takes the form of a volume containing contributions relating to the branch of knowledge for which he has been famous, and written by his friends and former pupils who take pleasure in thus showing their respect and their gratitude for the teaching they received from him years before. In this country the practice is almost unknown, and we cannot but regret this. We do, indeed, on occasion celebrate important events in the life of an honoured teacher, but it is seldom that the celebration goes farther than a dinner. There are, however, exceptions, and the volumes before us form a very appropriate memorial of Lord Lister's eightieth birthday. On April 5th, 1907, he reached the age of 80 years and he received many congratulations, not only from his own countrymen but from representatives of medicine and surgery in all parts of the civilised world. It was then felt that some permanent memorial should be instituted of an occasion so happy and of a life so rich in benefits to all the human race. It was therefore determined by those most fitted to judge that no more appropriate memorial could be chosen than an edition of his scientific papers, collected together from the many magazines and journals in which they had appeared, for in these papers are recorded the several steps by which was brought about the great revolution which will always be associated with his name, and in them those who come after will be able to find the great principles on which that revolution was founded. Lord Lister approved of the idea, and the two volumes now issued contain all the paper and addresses which he himself considers to be of permanent interest and importance; those only have been omitted which were addresses on some official occasions and dealt with matters of ephemeral or merely local interest. The committee responsible for preparing these volumes for the press consisted of Sir Hector Cameron, Sir W. Watson Cheyne, Mr. Rickman J. Godlee, Dr. C. J. Martin, and Dr. Dawson Williams, and the result does infinite credit to them.

The contents of these volumes have been classified under four heads: those in the first part deal with physiology, and those in the second part with pathology and bacteriology; in the third are papers on the antiseptic system and on general surgery, and in the fourth part are included general addresses and lectures. With regard to physiology, it is of interest to note the particulars with which the papers deal. In reading these articles and in appraising their value it must not be forgotten that the great discoveries of one generation become the commonplaces of the next, and in this case nearly two generations have passed since the first paper was published in 1853. The first three articles deal with the structure of involuntary muscular fibres. Five years before Kölliker had for the first time explained the cellular structure of all plain muscular fibres, and the researches contained in these papers were intended to confirm and extend the opinions which had been put forward by Kölliker, and this they succeeded in doing very satisfactorily. Although we have attained to a more thorough knowledge of involuntary muscle fibres, yet the advance indicated by our present knowledge is hardly so great as might have been expected. Some papers follow on the nerve-supply of arteries and the cutaneous pigmentary system of the frog, and then come several important articles dealing with the subject of the coagulation of the blood. The earliest of these recorded a large number of experiments, performed to test the various theories of coagulation which were then current. The most recent of these was the ammonia theory of that most ingenious and versatile of observers, Sir Benjamin Ward Richardson, who explained coagulation as being due to the escape of ammonia from the blood. Lister was at first inclined to accept this theory, but as he performed more and more experiments he was compelled to abandon it. He tested in turn the other current theories but found them all wanting; yet he was not insistent on propounding any rival theory: he merely stated the facts which appeared to be proved by the experiments he performed. The reader of these papers cannot fail to be struck by the judicial position maintained by the writer; even with regard to his own observations he never degenerates into a special pleader. The articles on coagulation were spread over a long period, the earliest appearing in 1858 and the latest in 1891.

Next in order we come to the section dealing with pathology and bacteriology, which is of more immediate importance from a medical point of view. This includes nine papers: the most important being, first, one on the early stages of inflammation, published in 1857, containing much that was new; and secondly, several dealing with fermentation and the relations of micro-organisms to disease, the earliest of which dates from 1873, being subsequent to the enunciation of the practice of antisepis. This paper is concerned with the influence of the medium on the growth of an organism, as exemplified especially by torulæ. Two others deal with the nature of fermentation as shown in the changes which occur in milk; another treats of the relations of micro-organisms to disease; and still another of their relations to inflammation, the opinion being expressed that many conditions influence the occurrence of inflammation, while the value of counter-irritation as a therapeutic measure is extolled. In these papers, which we need not discuss in detail, we have evidence of the care with which Lister deals with controversial matters; though he was himself the introducer of the idea that the presence of organisms caused inflammation and suppuration in wounds, yet he brings forward evidence, not conclusive in all cases we must now deem it, which tends to show that some inflammations may occur without the aid of micro-organisms.

The third part contains, as we have already mentioned, papers on the Antiseptic System and on General Surgery. The first articles dealing with the antiseptic system appeared in THE LANCET in 1867; they were entitled "On a New Method of Treating Compound Fracture, Abscess, &c.," and commence with the following sentence: "The frequency of disastrous consequences in compound fracture, contrasted with the complete immunity from danger to life or limb in simple fracture, is one of the most striking as well as melancholy facts in surgical practice." This is the keynote of the paper—what is it that prevents a compound fracture from healing as readily as one that has no communication with the outer air? Lister says at once that the decomposition of animal matter in the wound is produced by the entrance of germs with the air, and he also points out that it is probable that the pernicious effects of decomposing animal matter upon the tissues had been underrated. He cites in proof of this doctrine the harmlessness of a pneumothorax resulting from puncture of the lung by a fractured rib, which proves that atmospheric air in itself is not harmful, and he contrasts the

ready absorption of the air in a pneumothorax so produced with the harmful results of a pneumothorax caused by an external wound. It occurred to him that if it were possible to dress the wound in a compound fracture with some substance capable of killing these septic germs it should heal like a simple fracture. A year earlier he had seen that carbolic acid prevented the odour from decomposing sewage, and he determined to employ it for treating compound fractures. The first case, in May, 1865, was a failure, but in August a success was obtained. Other successes followed, and the technique varied, with the results which he now began to obtain. Sometimes merely lint dipped in liquid carbolic acid was laid on the wound, and in others a carbolic putty was employed; pieces of sheet tin were also tried to keep the carbolic acid in the dressing. The events were surprisingly good, though the means employed seem now to be extremely crude. In all 12 cases are mentioned, and of these two died. The first fatal case should, perhaps, hardly be counted in the series, for the method was only being devised; and the other patient died from hæmorrhage from the femoral artery caused by pressure of a fragment of the broken bone. This second case had survived the original accident four months, so that even in it the method could not be described as absolutely a failure. The same paper contains an account of a method of opening chronic abscesses, such as those of the psoas, by which septic infection was prevented, where Lister showed that if the skin is covered by a rag soaked in carbolic oil and the incision is made under this, one edge being lifted up for the purpose, the pus can escape but germs do not enter. The re-dressings were performed with similar precautions, and the happy issue of a number of cases demonstrated the success of the method and the truth of the theory.

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The succeeding papers are mainly concerned with records of individual cases in which the antiseptic method had been employed and with accounts of modifications of the method suggested by a widening experience. Various antiseptic plasters are tried; notably a combination of shellac with carbolic acid proved useful, and various operations are described in which the method had been performed. In one case a penetrating wound of the thorax and abdomen with prolapse of omentum was treated successfully and an empyema did not develop, as in those days might have been confidently expected; and in another case an acute infective periostitis of the tibia healed well. A case of old fracture at the ankle with a fixed displacement of the foot was treated by an open operation and the foot replaced in position without any septic complications occurring; in fact, it is obvious that Lister was discovering that the field of the activity of the surgeon was being greatly widened. Here also we find an account of a successful ligature of the external iliac artery in its continuity, the ligature being cut short. Two papers on the value of catgut for ligatures and sutures follow and detailed accounts are given of the method of preparation and the desiderata in catgut to be used for surgical purposes. The later of these papers appeared in THE LANCET only last year.

Other articles included have appeared in the medical press from time to time dealing with important cases treated by the antiseptic method—for instance, the case of a man, 30 years old, who was struck by a railway engine and sustained a compound fracture of an ankle, a compound fracture of an elbow, and extensive scalp wounds baring the bone; recovery follows the treatment adopted, and Lister shows by the method which he describes that though he may vary the details the principles of therapy remain the same, and that thoroughness of the practice remains the one essential factor. In reference to this case he points out that the antiseptic is not applied to the surface of the wound after the original application; the tissues having been freed from the germs which had infected the wound are allowed to recover unirritated by antiseptic applications. He describes various forms of protection, the special function of which is to exclude the antiseptic of the dressing from the wound. In 1870 there appeared in the *British Medical Journal* Lister's suggestions for the application of the antiseptic method to the wounded in the Franco-Prussian war which was then raging, and the suggestions represent the treatment reduced to what he thought to be its minimum—the very least, i.e., that could be done in the circumstances. In a case reported in 1871, in which Lister operated for the improvement of a vicious union of a fractured forearm, we first hear of the use of the carbolic spray during the operation, and for the dressing oakum was employed successfully in place of carbolic putty or lac-plaster. The oakum soon led to the use of gauze impregnated with carbolic acid, resin, and paraffin, while a layer of guttapercha tissue prevented the discharge from soaking directly through the dressing. In the Address on Surgery at the Plymouth meeting of the British Medical Association held in 1871 Lister gave a full account of the method he then pursued; in this address we have the first description of cotton-wool employed as a dressing, and the reason for its use is stated to be its power of filtration of minute particles from the air as described by Tyndall. In this paper also we first find the expression antiseptic gauze. In 1875 articles on recent improvements in the details of antiseptic surgery appeared in THE LANCET, and a description was given of the methods of preparing gauze and sponges, while an account was included of the use of boric acid, and some details of drainage were also described. When the British Medical Association met at Edinburgh in 1875, Lister, as president of the Surgical Section, delivered an address on the effect of antiseptic surgery in improving the condition of hospitals, and he gave some demonstrations and performed some operations before members of the Association. In 1881, when the International Medical Congress was held in London, Lister gave an address on the treatment of wounds, in which he re-stated the case in favour of the antiseptic method. The search for even more perfect means led in 1884 to the publication of a paper on the use of corrosive sublimate as a surgical dressing, in which he points out the desirability of having a non-volatile antiseptic if possible. In order to diminish the irritation he combines the corrosive sublimate with the albumin contained in horse serum, and afterwards uses sal alembroth, while later still, in 1889, the double cyanide

of zinc and mercury is brought forward as being more useful than corrosive sublimate. A paper read at the International Medical Congress at Berlin in 1890 marks further advances: the spray had been abandoned and less and less antiseptic was being applied to the surface of wounds, so that the amount of discharge was less, and less drainage was needed. A contribution to the Virchow-Festschrift in 1891 reaffirmed the principles of antiseptic surgery, and a short letter to Sir Hector Cameron on some points in the history of antiseptic surgery, written in 1906 and published in THE LANCET in 1908, concludes the first division of this section of the work. The most remarkable of the six papers on general surgery which comprise the second division of the section are one on excision of the wrist for caries, in which Lister describes his well-known operation, and one on the treatment of fracture of the patella, the reprint of an address delivered before the Medical Society of London in 1883. This paper is supplemented by one on fractures of the patella of long standing, which was published only last year in our columns. The article on amputation in Holmes's "System of Surgery" was also from Lister's pen, and is here reproduced.

All the addresses which form the concluding part of the volume are of interest, especially that on the inter-dependence of science and the healing art, delivered at Liverpool in 1896, in which Lister showed how the whole of the progress of medicine and surgery is dependent on the scientific study of the causes and phenomena of disease. The third Huxley lecture, delivered at Charing Cross Hospital in 1900, contains a *résumé* of Lister's scientific work, and the concluding article, an obituary notice of Lister's father, is of interest, for he did much to improve achromatic microscopes, and his influence on the direction of his son's work was doubtless great. The mass contained in these volumes has compelled us to notice some of the papers rather cursorily, but each is deserving of perusal as the work of a pioneer, and we think that no better memorial of their distinguished author could have been devised. It affords us the greatest pleasure to bear witness to the clearness and the thoroughness with which these papers have been written: their permanent value is assured as a record from year to year of the most important advance in surgery that the world has ever known.

Practical Bacteriology, Blood Work, and Animal Parasitology, including Bacteriological Keys, Zoological Tables, and Explanatory Clinical Notes. By E. R. STITT, A.B., Ph.G., M.D., Surgeon, U.S. Navy; Graduate, London School of Tropical Medicine; Instructor in Bacteriology and Tropical Medicine, U.S. Naval Medical School; Lecturer on Tropical Medicine, Jefferson Medical College. With 86 illustrations. London: H. K. Lewis. 1909. Pp. 294. Price 6*s.* 6*d.* net.

THIS is a small book, of less than 300 pages, in which the author essays to treat of bacteriology, hæmatology, and animal parasitology. It is natural for the reviewer to look askance at such an attempt, but it must be confessed that, within certain self-imposed limits, Dr. Stitt has been singularly successful and has produced a work of real value. It is not a book from which to learn systematic bacteriology, nor is it perhaps suitable for the elementary practical class, but for the man who has had some training in laboratory work, and is able to make use of the short descriptions and many practical hints contained in the work, it will prove extremely useful. The book is described as "practical," and the right to use the adjective is most fully earned. It is founded on the experience of the author gained in examining and teaching candidates for the American Naval Medical Service. This experience, which rests upon a knowledge of the work of medical graduates already to some extent trained, leads the author, we think, to under-estimate the difficulties of the less advanced student, and to regard the book as suitable for a somewhat larger circle of workers than is justifiable.

Perhaps the most characteristic features of the volume are its definiteness of statement and the use made of "keys" or classifications, both for the scientific arrangement of the organisms treated and for the practical purpose of their ready separation and identification. This classification is especially valuable in the section on animal parasitology, as the student usually finds much difficulty in this direction. The practical object of the book is also well served by the illustrations, in which ova, parasites, &c., are arranged in groups for the purpose of comparison and discrimination. The opening section deals with bacteriology and treats of the methods of culture, staining, and identification of micro-organisms. This is followed by a short description of the principal pathogenic organisms, especial stress being laid upon the features which serve for their differentiation. Immunity is discussed shortly in its theoretical aspects, but only as the basis for the practical application of methods for the production of the various agglutinating and hæmolysing sera which are of use in diagnosis. In this section it is to be noticed that the theoretical "side chains" of Ehrlich's hypothesis are spoken of as "protoplasmic particles"; it is a fate which was sure to overtake this conception sooner or later. The section on hæmatology is, so far as its limits allow, accurate and satisfactory. Animal parasitology occupies about half the book, and the information given will prove most useful to medical men working at this subject.

The volume is well printed and well illustrated. It will be especially valuable to medical officers of the naval or colonial service, as well as to the majority of practitioners following their profession in tropical climates.

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IN 1859 Claude Bernard published his famous "Leçons sur les Liquides de l'Organisme," which dealt with all the fluids of the body. Professor Starling's lectures—eight in all—are more restricted in their scope, for they deal with the physical properties of protoplasm, osmotic relations of cells, intake of fluid, exchange of fluids and production of lymph, absorption of the interstitial fluids, output of fluid, fluid balance of the body, and the causation of dropsy. The last is an Arris and Gale lecture of 1896, with certain alterations necessitated by recent work on the subject. If protoplasm must be regarded as a fluid, and as consisting of a solution or suspension in water of compounds of very varying complexity, then the energies displayed by living cells must be derived from the energies of substances in solution. They are derivable from, and measurable in terms of, osmotic energy, and of surface energy when occurring at the dividing surface between the living cell and its environment. The available energy of a cell may be regarded as made up of two factors—namely, (1) the total osmotic pressure of all the dissolved substances present in the cell; and (2) the chemical energy of those substances. This is the theme of the first lecture. An interesting account is given of colloids and their importance—their instability, the surface phenomena of colloidal solutions—as the changes in cells take place in a colloidal medium.

The importance of the "Plasmahaut," or superficial layer of protoplasm, in maintaining the "privacy of cell life," and its "qualitative permeability" form an integral part of the lecture on Osmotic Relationships of Cells. The medium surrounding the cells must have a definite osmotic pressure, and this pressure must be supplied by specific salts. The cœlomic fluid—the internal medium of higher animals,

ready absorption of the air in a pneumothorax so produced with the harmful results of a pneumothorax caused by an external wound. It occurred to him that if it were possible to dress the wound in a compound fracture with some substance capable of killing these septic germs it should heal like a simple fracture. A year earlier he had seen that carbolic acid prevented the odour from decomposing sewage, and he determined to employ it for treating compound fractures. The first case, in May, 1865, was a failure, but in August a success was obtained. Other successes followed, and the technique varied, with the results which he now began to obtain. Sometimes merely lint dipped in liquid carbolic acid was laid on the wound, and in others a carbolic putty was employed; pieces of sheet tin were also tried to keep the carbolic acid in the dressing. The events were surprisingly good, though the means employed seem now to be extremely crude. In all 12 cases are mentioned, and of these two died. The first fatal case should, perhaps, hardly be counted in the series, for the method was only being devised; and the other patient died from hæmorrhage from the femoral artery caused by pressure of a fragment of the broken bone. This second case had survived the original accident four months, so that even in it the method could not be described as absolutely a failure. The same paper contains an account of a method of opening chronic abscesses, such as those of the psoas, by which septic infection was prevented, where Lister showed that if the skin is covered by a rag soaked in carbolic oil and the incision is made under this, one edge being lifted up for the purpose, the pus can escape but germs do not enter. The re-dressings were performed with similar precautions, and the happy issue of a number of cases demonstrated the success of the method and the truth of the theory.

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IN 1859 Claude Bernard published his famous "Leçons sur les Liquides de l'Organisme," which dealt with all the fluids of the body. Professor Starling's lectures—eight in all—are more restricted in their scope, for they deal with the physical properties of protoplasm, osmotic relations of cells, intake of fluid, exchange of fluids and production of lymph, absorption of the interstitial fluids, output of fluid, fluid balance of the body, and the causation of dropsy. The last is an Arris and Gale lecture of 1896, with certain alterations necessitated by recent work on the subject. If protoplasm must be regarded as a fluid, and as consisting of a solution or suspension in water of compounds of very varying complexity, then the energies displayed by living cells must be derived from the energies of substances in solution. They are derivable from, and measurable in terms of, osmotic energy, and of surface energy when occurring at the dividing surface between the living cell and its environment. The available energy of a cell may be regarded as made up of two factors—namely, (1) the total osmotic pressure of all the dissolved substances present in the cell; and (2) the chemical energy of those substances. This is the theme of the first lecture. An interesting account is given of colloids and their importance—their instability, the surface phenomena of colloidal solutions—as the changes in cells take place in a colloidal medium.

The importance of the "Plasmahaut," or superficial layer of protoplasm, in maintaining the "privacy of cell life," and its "qualitative permeability" form an integral part of the lecture on Osmotic Relationships of Cells. The medium surrounding the cells must have a definite osmotic pressure, and this pressure must be supplied by specific salts. The cœlomic fluid—the internal medium of higher animals,

representing blood, lymph, and tissue fluid—was probably at its first appearance in the history of its evolution simply an enclosed portion of the surrounding medium or sea-water; and indeed "the three elements sodium, potassium, and calcium are in proportion very much like those that now obtain in sea water." By its means the cells obtain an average constancy of environment. They can thus devote their entire energies to the discharge of their particular functions. The intake of water, regulated through the intermediation of the central nervous system, occurs chiefly in the small intestine; and the cells of the intestinal villi are probably lipoid in character, and therefore physically permeable only by such substances as are soluble in such a membrane—e.g., water, urea, alcohol. The transference of water from the lumen of the gut into the blood stream is effected by forces having their origin in the epithelial cells themselves. The fourth lecture deals with the importance of the "tissue fluid"—which is the real internal medium of the body—and with lymph production. Absorption from serous cavities and from connective-tissue spaces is next dealt with. As to the "output of fluid" (Lecture VI.), the function of the kidney is to keep the composition of the circulating fluid constant, and this organ possesses "in the highest degree the phenomenon of 'sensibility,' the power of reacting to various stimuli in a direction which is appropriate for the survival of the organism." The author next discusses the dual nature of the kidney's activity, glomerular and tubular; and reviewing all the experimental facts, he concludes that they do not negative the view that the glomerular epithelium plays the part of a passive filter in the formation of urine (p. 120). As to the renal tubules they both secrete and absorb, and thus modify the glomerular transudate, not only by the absorption of water but also by the absorption of dissolved constituents. "An absorptive mechanism, sensitive to and reflecting the nutritive condition of the whole body, especially as concerns water and salts, is needed in the tubules" (p. 132). The "fluid balance of the body" is studied under the heads of plethora brought about by increasing the total volume of blood, or by the introduction of normal saline solution—hydræmic plethora; and of anæmia—i.e., a diminution of the total volume of the blood. The guiding principle in regard to the maintenance of the arterial blood pressure is the need of the master tissue of the body—the brain—for a constant supply of blood and oxygen; indeed, the whole vascular system is subordinate in its activity to the needs of the brain (p. 147). The last lecture is a useful corollary to the foregoing, and though we are told that "the causation of dropsy in Bright's disease is at present enshrouded in ignorance," the eighth lecture is one of the most interesting and practical in the whole series.

No one is better qualified than Professor Starling to discourse on the fluids of the body—a subject which his own researches have done so much to advance; and the interest of the reader is maintained, not only by the masterly grouping and orderly arrangement of facts, but by the convincing cogency of the arguments.

LIBRARY TABLE.

Friedberger and Fröhner's Veterinary Pathology. Authorised Translation by Captain M. H. HAYES, F.R.C.V.S., with Bacteriological Notes by Professor R. T. HEWLETT, M.D. Lond., D.P.H. Sixth edition. London: Hurst and Blackett. 1908. Pp. 1433. Two volumes. Price 21*s.* net.—Every up-to-date veterinarian acknowledges this work as the standard text-book on the diseases of animals, and the late Captain Hayes did the profession a very valuable service when he made this translation from the German. When it is mentioned that the book has been translated into French and is accepted as a standard text-book in the French veterinary colleges, it will easily be understood that the opinions of Friedberger and Fröhner are highly valued by veterinary practitioners. There is also an American translation which has had a very extensive sale. It is not, however, only to veterinarians that the book appeals, but to the medical officer of health as well. Apart from the wide view which it gives of the comparative aspect of disease in the various domesticated and wild animals and birds, it touches briefly upon analogous diseases in man, and the opinions given are broad-minded and rational. Especially is it useful to the medical man who is in constant or frequent contact with a veterinary *confrère*, as by a reference to one or other of the volumes he can in a lucid manner and within a very few minutes obtain most valuable information in regard to the contagious diseases of animals and birds. Such diseases as anthrax, tuberculosis, rabies, glanders, trichinosis, actinomycosis, and many others which are communicable to man are fully dealt with, whilst in other diseases, as, for example, diphtheria, scarlet fever, and measles, the pitfalls into which an inexperienced medical man may fall can be readily avoided by a perusal of the paragraphs on these ailments. To single out the description of any one particular disease for special mention and allusion here is quite unnecessary; all are equally well and fairly described, and in a manner which does great credit to the authors. It is a book which every medical man who is at all interested in the diseases of animals should possess and peruse, for it contains a mine of most trustworthy and up-to-date information.

The General Characters of the Proteins. By S. B. SCHRYVER, Ph.D., D.Sc. London: Longmans, Green, and Co. 1909. Pp. 86. Price 2*s.* 6*d.* net.—This "essay" is one of a series of excellent monographs written by an author who has been working steadily at the difficult subject of the properties of proteins, with the object of determining how far they are of value for devising methods of isolation and identification of individual members of the class. The author, however, admits that these methods are still very unsatisfactory—nay, they are even extremely defective in their character. Even the biological methods which are available for the physiologist are beyond the scope of the worker whose only resource is a laboratory for pure chemistry. The physical properties of proteins are first dealt with, such as their solubility, their behaviour on "salting out," their susceptibility as regards crystallisation and coagulation, their optical relations, molecular weight, electrical conductivity, and fractional filtration. Then follow their chemical characters—e.g., colour and other reactions, their N. S. and P. constituents, oxidative products, and the action of reagents on them. The reader, to profit fully, must read along with this work the two sister volumes on "The Chemical Constitution of the Proteins," by R. H. Aders Plimmer. This monograph will prove most useful as an excellent *résumé* of the subject with which it deals.

Text-book of Experimental Psychology. By CHARLES S. MYERS. London: Edward Arnold. 1909. Pp. 432. Price 8*s.* 6*d.*—In this work the author does not offer a systematic psychology, but a description of the methods and principles of psychological experiment and an exposition of the most important results that have emerged in this field of research. It is at the outset made clear that experimental psychology is no new subject; it is, at least, as old as Aristotle. Far from being independent of general psychology, it has arisen from it as a refinement, while familiarity with general psychology is essential to success in experimental psychology. It is only the possibility of giving a physical expression to mental states which confers on both general and

experimental psychology the rank of a science, and this physical expression is obtained by the observation of the subject's outward behaviour, and by the description of the subject's inner experience. A large portion of the book is occupied with a study of the sensations, and the rest contains chapters on statistical methods, reaction times, memory, attention, and kindred subjects. The book concludes with lucid descriptions of the numerous experiments which may be conducted in psychological laboratories. We can confidently recommend the work as a valuable guide for the student of a complex science.

Röntgen Ray Wrinkles. By LESLIE MILLER. Price 1s. net.—This little pamphlet may be correctly described as an epitome of the science of x ray photography in so far as the management of the apparatus is concerned. Mr. Miller, who is a practical electrician with a wide experience of x ray procedures, is to be congratulated upon the amount of valuable and accurate information, stated in clear language, that he has succeeded in condensing into such a small space. To the novice it should prove of invaluable assistance in dealing with the numerous pitfalls that impede his progress, and so complete is it that the more advanced x ray worker is almost certain to find new ideas and possibly also help out of an unusual difficulty. We note a point stated by the author which has never been sufficiently insisted upon—namely, that no matter how large the coil may be the discharging pillars should be so placed that the points can never be separated more than eight inches. Working a coil to see how long a spark it will give is a serious strain on its insulation and one that should be avoided. The section devoted to x ray tubes is a very good one, and an observance of the directions there given should meet with good results as well as a long life for the tube itself. Here the beginner learns to understand some of the vagaries of the fascinating, but at times very exasperating, sources of the x rays, such knowledge being, of course, the foundation of the successful practice of radiography. The pamphlet may be obtained from the author, at 66, Hatton-garden, London, E.C.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on May 27th, with Dr. F. H. Champneys in the chair. The chairman, referring to proceedings undertaken by the Director of Public Prosecutions in regard to false certificates under Section 11 of the Midwives Act, said that medical men amongst others sometimes signed certificates and similar documents without as full an inquiry into the circumstances of the case as was desirable. The chairman said that the Board was anxious to have the abuse stopped, and he hoped that the proceedings would have a salutary effect and that certificates would be more carefully looked into before they were signed. A letter was read from the clerk of the West Sussex county council, suggesting that the local supervising authority should be temporarily enabled to permit uncertified women approved by them to practise as midwives after March 31st, 1910, in certain cases. The Board decided that the reply should be that there was no power under the Midwives Act to carry out that suggestion, and that the Board did not approve of it. A letter was read from Mrs. L. R. Cooper, an approved midwife, inquiring as to quarantine to be imposed on pupils coming from hospitals of the Metropolitan Asylums Board. The Board decided that inquiry should be made as to the practice of the Metropolitan Asylums Board in that respect. The report of the standing committee of the Board stated that Mr. A. G. R. Foulerton, medical officer of health of East Sussex, had attended and discussed with the committee the relations between midwives and medical practitioners, and the best means of preventing "covering." The Board decided that the attention of the Midwives Act Committee should be called to the subject.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

WEDNESDAY, MAY 26TH.

THE Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

Penal Cases.

The Council devoted the whole of the sitting to the hearing of charges brought against medical practitioners.

The first case was that of Robert Kirk, formerly registered as of Delmynden, Carshalton, Surrey, but now of Willington, co. Durham, M.B., Mast. Surg., 1897, Univ. Glasg., who had been summoned to appear before the Council on the following charge, as formulated by its solicitor:—

That you abused your position as a medical man by committing adultery on various occasions with Laura Sarah Hepple, the wife of Oliver Hepple, when you were professionally attending her and her children, Nellie, Ivy, and Olive Isabel, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainant was Mr. Oliver Hepple, who attended, accompanied by Mr. Hempson, his solicitor.

Dr. KIRK did not answer his notice, nor was he represented.

Mr. HEMPSON made a statement relating to the charge and submitted documentary evidence with a view to show that Dr. Kirk had been in medical attendance on Mr. Hepple's family to a very recent date.

After hearing the evidence of Mr. OLIVER HEPPLE, the Council deliberated on the case *in camerâ*.

The PRESIDENT, addressing Mr. Hempson, said: I have to announce to you that the Council have judged Robert Kirk to have been guilty of infamous conduct in a professional respect, and have directed the Registrar to erase from the Medical Register the name of Robert Kirk.

The Council then considered the case (adjourned from May 27th, 1908) of Christopher Richard Kempster, registered as of Whitehall, Bank Place, Collins-street, Melbourne, Mem. R. Coll. Surg. Eng. 1896, Lic. R. Coll. Phys. London, 1896, who had been summoned to appear before the Council on the following charge, as formulated by its solicitor:—

That you have accepted and continue to hold the appointment of chief surgeon to the Freeman & Wallace Electro-Medical Institute, of Melbourne and Sydney, Australia, a company which habitually seeks to attract patients by the insertion in the *Argus* newspaper of advertisements of a scandalous, offensive, and indecent nature, accompanied by a portrait of yourself and a statement of your qualifications, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainants in this case were the London and Counties Medical Protection Society, Limited, which was represented by its secretary, Dr. Hugh Woods.

Mr. KEMPSTER did not answer to his notice, nor was he represented by counsel or solicitor.

Dr. HUGH WOODS, who conducted the case on behalf of the complainants, submitted to the Council copies of the newspaper containing the advertisement of which complaint was made. The only point in Mr. Kempster's favour was that to some extent he seemed to suggest that he had been drawn into a contract with the institute in question in comparative ignorance of the nature of it, that he did not in any way approve of the advertisements complained of, and that he was withdrawing from it. He (Dr. Woods) had no proof of this except a slight explanation made by Mr. Kempster himself, and unless Mr. Kempster was able to satisfy the Council that he was unaware of the character of the institute when he made the contract, that he dissociated himself from it at the earliest possible moment, and did all in his power to put his position right, he would ask the Council to find him guilty of the charge now made against him.

Mr. WINTERBOTHAM (the solicitor to the Council) said that attention had been drawn to this case by the Medical Board of Victoria. Communications had passed with Mr. Kempster, who stated that when he entered into the contract he had not anticipated that his name would be advertised in the manner it had. He had had difficulties with regard to it. He also had written to say that he had severed his connexion with the institute. However, he had not broken any local regulations.

The Council deliberated on the case *in camerâ*.

The PRESIDENT (on the readmission of the public) said: Dr. Woods, I have to announce that the Council has adopted the following resolution:—

That the Council do now judge Christopher Richard Kempster to have been guilty of infamous conduct in a professional respect, and do direct the Registrar to erase from the Medical Register the name of Christopher Richard Kempster.

The next case to come up for consideration was that of Charles William Brown, registered as of 7, Chorlton-road, Hulme, Manchester, M.B., Mast. Surg. 1889, Univ. Edin., who has been summoned to appear before the Council on the following charge, as formulated by its solicitor:—

That you have employed as your assistant in connexion with your professional practice a person not duly qualified or registered under the Medical Acts, namely, Mr. Amery, and have knowingly allowed him on your behalf to attend and treat patients in respect of matters requiring professional discretion or skill, and that in relation thereto you have been guilty of infamous conduct in a professional respect.

The complainant was Mr. Thomas George Paterson, who attended and was accompanied by Mr. Alfred Tarbolton of Messrs. Brett, Hamerton, and Tarbolton, solicitors, Manchester.

Mr. Brown appeared in answer to his notice. He was defended by Mr. A. H. Bodkin, counsel, instructed by Mr. W. H. Martin.

Mr. TARBOLTON, who stated the complainant's case, said that the complaint was made by Mr. Paterson, who when called in as a medical man by a family of the name of Simpson in 1908 was told certain facts. These facts gave him the premonition that Mr. Brown was employing an unqualified man, Mr. Amery, for work on which he ought not to employ him. He disclosed these to the chairman of a local division of the British Medical Association, omitting the name, and when the matter was brought before others connected with it they unanimously said that action should be taken.

Mr. BODKIN (intervening): What we have got to do with is not what 12 medical men may have said or done. I would ask Mr. Tarbolton to confine his statement to something relevant to this charge.

Mr. LUSHINGTON (the legal assessor): Mr. Tarbolton, you had better confine yourself to the matter you are trying to prove.

Mr. TARBOLTON went on to say that Mr. Amery was dispenser and bookkeeper to Mr. Brown. He stated that Mr. Amery had for some time paid visits to the house of the Simpsons to attend Miss Jane Simpson, that medicine was called for at Mr. Brown's surgery, and that both Mr. Brown and Mr. Amery had attended Mr. Simpson, the father, on his last illness. He further said that Mr. Brown's account in the case of the father's illness amounted to 17*s.* 6*d.* The customary charge of a medical man in the locality in question was half a crown a visit, and Mr. Brown made five visits. He also referred to a confinement at which Mr. Amery was alleged to have taken a leading part. He also said that he had statutory declarations to show that at operations which Mr. Brown performed Mr. Amery administered the anæsthetic. He was proceeding to refer to the declaration of Mr. E. A. Burgess, M.R.C.S., L.S.A., who had been a locum-tenent for Mr. Brown, when

Mr. BODKIN (intervening) took objection to the declaration on the ground that it was dated as recently as May 18th, 1909, and although he had invited the complainant's solicitor to produce all essential witnesses Mr. Burgess was not present.

Mr. LUSHINGTON ruled that the declaration should be admitted. The Council had no power to compel the attendance of a witness, but when a person who had made a declaration was not put into the witness-box to be cross-examined counsel was allowed a great latitude of criticism.

Mr. TARBOLTON went on to read the declaration of Mr. Burgess, who alleged that during the time when he was locum-tenent for Mr. Brown he found that Mr. Amery was attending to patients.

Mr. THOMAS GEORGE PATERSON was then called as a witness. He said that he was acting from no personal feeling. He spoke on various points touched in the speech of Mr. Tarbolton. The usual fee for a visit and medicine in the district in which the Simpsons lived was 2*s.* 6*d.* 3*s.* 6*d.* was not a usual charge.

Mrs. MARIANNE SIMPSON also gave evidence and stated that Mr. Amery had come to see her daughter. She had considered that he was a qualified medical man and she called him "Dr. Amery." Medicine had been got at Mr. Brown's surgery. Both Mr. Brown and Mr. Amery had gone to see her husband in his last illness. When she paid the bill of 17*s.* 6*d.* she assumed that it was at the rate of 2*s.* 6*d.* a visit.

Cross-examined by Mr. BODKIN, WITNESS admitted that she took no memoranda of how often Mr. Brown came to see her husband in 1907, but she remembered how often he came.

Mr. BODKIN: I suggest to you that from the first time that Mr. Brown saw your husband to the last, he went to your house five times?

WITNESS: He came three times.

Mr. LUSHINGTON: Did Mr. Brown ever give you medicine personally himself?

WITNESS: No, never.

Mr. LUSHINGTON: During the time that Mr. Amery was seeing your daughter's eyes for four years, did you ever get any bill at all from Mr. Brown?

WITNESS: No.

Mr. LUSHINGTON: There was no other account owing to him except in respect of your husband?

WITNESS: No.

Mr. TARBOLTON submitted statutory declarations from other persons in relation to this case.

At the request of Mr. BODKIN the Council assented at this stage to hear the evidence of two medical men from Manchester on behalf of Mr. Brown.

Dr. THOMAS ARTHUR HELME, honorary surgeon to the Northern Hospital, Manchester, examined by Mr. Bodkin, stated that he had practised in Manchester for 20 years, and last year he was chairman of the Lancashire and Cheshire Branch of the British Medical Association. He had known Mr. Brown for a long time. His opinion was that Mr. Brown was a man of the highest standing in the medical profession and never had there been a breath of suspicion against him as a member of it. He went on to say that the charge of 3*s.* 6*d.* was an ordinary one in the district in which Mr. Brown practised.

Dr. ARTHUR WILSON CHAPMAN, J.P., who stated that he was a member of the Manchester city council, said that he had known Mr. Brown about 20 years. Mr. Brown's character and reputation were of the highest. He (Dr. Chapman) got a fee of 3*s.* 6*d.* a visit in the neighbourhood in question. Only this week he had sent one out at the rate of 5*s.* per visit.

The Council adjourned.

THURSDAY, MAY 27TH.

The Council resumed its sittings at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was again in the chair.

Bristol University Bill.

The PRESIDENT announced that he had received from the Privy Council a copy of Bristol University Bill, which had passed its second reading in the House of Lords. Clauses 7 and 8 of the Bill affected the Council and he thought that it would be desirable to have them placed on record in the minutes. He moved accordingly.

The motion was agreed to. Clause 7 gives the University power to hold qualifying examinations in medicine, surgery, and midwifery for the purpose of granting a diploma or diplomas conferring the right of registration under the Medical Acts. Clause 8 entitles the council of the University to chose one representative to be a member of the General Medical Council.

Penal Cases.

The Council resumed the hearing of the charge made against Mr. Charles William Brown (consideration of which was adjourned from the previous day).

Several witnesses were examined in support of the charge, and this closed the case against Mr. Brown.

Mr. BODKIN addressed the Council on behalf of Mr. Brown, who, he said, was a gentleman of the highest position and integrity in the medical profession in Manchester. The case had not been sent to the General Medical Council by a branch of the British Medical Association in Manchester, for Dr. Helme, whose position had been explained to the Council on the previous day, denied that it had. The charge was that Mr. Brown had been covering an unqualified assistant. In order that he might deal effectively with that charge

counsel said that he must state what he conceived it to be. He supposed that it was unprofessional and improper conduct for a medical man to spread himself out, as it were, over a larger area of practice than legitimately fell to him, by the employment of unqualified persons and thereby to enrich himself. If that was the true significance of the offence, then he submitted that there was not a tittle of evidence against Mr. Brown in this case from beginning to end. First let him deal with the case of the Simpsons. It appeared that Mr. Simpson, the father, asked Mrs. Amery, the mother of Mr. Amery, to send her son to see his daughter. He refused to go. Mr. Simpson asked again and Mr. Amery consented. He (Mr. Bodkin) would bring evidence to show that from the first time that Mr. Amery attended Miss Simpson to the last, Mr. Brown had no knowledge of the matter. There was never an entry in any single book of Mr. Brown in regard to the Simpsons except with regard to the last illness of the husband. Mr. Brown never saw Miss Simpson in a professional capacity and never knew that Mr. Amery was attending her. A further charge made against Mr. Brown was that he allowed Mr. Amery to administer anæsthetics. Mr. Amery never administered chloroform or ether, nor had he taken any part at a confinement which it was improper he should take. Counsel also commented on the fact that Mr. Burgess did not appear as a witness and submit himself to cross-examination. There was not a particle of evidence against Mr. Brown and he asked the Council to acquit this gentleman of the charges which had been made against him.

Mr. CHARLES WILLIAM BROWN went into the witness-box and spoke in detail with regard to the matters touched on in his counsel's speech. He had employed Mr. Amery for eight years as dispenser and bookkeeper. He had never allowed Mr. Amery to do work which it was not right for him to do. He had never called at the Simpsons before being called in for the illness of Mr. Simpson. He submitted his books to the Council showing that he had paid five visits on this occasion and his charge for those five visits was 17*s.* 6*d.* He did not know that Mr. Amery received anything. He (Mr. Brown) attended the accouchement which had been referred to and carried it out. Mr. Amery might have been present with him, but if there had been any stitching of the patient he (Mr. Brown) would have put it in himself.

Mr. BODKIN: Either in this account of 17*s.* 6*d.* or in any other way have you had 6*d.* for the attendance of Mr. Amery on a patient?

Mr. BROWN: Never in my life.

Mr. TARBOLTON briefly cross-examined the witness.

Mr. LUSHINGTON: When you took Mr. Amery did you know anything about what examinations he had passed?

Mr. BROWN: No.

The PRESIDENT: Has he passed any examination while he has been in your service?

Mr. BROWN: No, he has not.

Mr. LUSHINGTON: Did you know he was prescribing in a charitable way?

Mr. BROWN: I did not know until November, 1907.

Do you think it proper that he should prescribe even in a charitable way?—Witness was understood to reply in the negative.

Have you told him not to do so?—Yes.

When did you warn him?—I have discussed it with him.

When?—Since this case arose.

Are you satisfied you have put a stop to it now?—Yes.

Mr. WILLIAM AMERY also gave evidence. Replying to Mr. Bodkin, he said that he was a fourth year's student under the old regulations. He had been employed for some years by Mr. Brown as a dispenser and assistant. He had known the late Mr. Simpson for many years and was on terms of friendship with him. Yielding to the pressure brought to bear on him by his (witness's) mother and Mr. Simpson he agreed to attend the latter's daughter for her eyes.

For about four years you attended Miss Simpson and received money for your visits?—Yes.

Was any entry made in Mr. Brown's books of these visits?—Never.

Did you tell Mr. Brown you had attended her?—I do not think so.

Did he know you were attending her?—I do not think he did.

Did you ever attend Mr. Simpson medically or as a doctor?—No.

Did you go one night to see Mr. Simpson?—I did, and I paid, I think, one or two visits to him.

Was any charge made for these visits?—No.

How do you determine the 3*s.* 6*d.* visits?—It does not go by streets. It goes more by the people. It was left to me and I just used my discretion in the matter. He had, he added, never administered chloroform or ether to anyone.

The PRESIDENT having intimated that the case for the defence might close at this point,

The Council deliberated *in camerâ*.

When the public were admitted the PRESIDENT said: M. Charles William Brown, I have to announce to you that the facts alleged against you in the notice of inquiry have not been proved to the satisfaction of the Council. That closes the case.

The Council adjourned.

FRIDAY, MAY 28TH.

The Council resumed its sittings at its offices, 299, Oxford-street. Sir DONALD MACALISTER, the President, was in the chair.

New Member.

An intimation was read from the Victoria University, Manchester, announcing that it had appointed Dr. John Dixon Mann to be a member of the General Medical Council for the term of two years from May 12th, 1909.

Appointment of Committees.

On the motion of Dr. NORMAN MOORE, the nominations of the Branch Councils for the various committees of the Council were adopted as follows:—

Examination Committee.—The English Branch Council: Dr. Taylor, Dr. Saundby, and Dr. Caton. The Scottish Branch Council: Sir Thomas Fraser, Dr. Finlay, and Dr. McVail. The Irish Branch Council: Sir John Moore, Sir Charles Ball, and Dr. Kidd.

Education Committee:—The English Branch Council: Dr. Norman Moore, Sir G. Philipson, and Sir John Williams. The Scottish Branch Council: Dr. Mackay, Mr. Hodsdon, and Dr. Knox. The Irish Branch Council: Sir Thomas Myles, Sir C. Nixon, and Dr. Little.

Public Health Committee:—The English Branch Council: Dr. Cocking, Sir William Power, and Dr. McManus. The Scottish Branch Council: Dr. Norman Walker, Sir John Tuke, and Dr. McVail. The Irish Branch Council: Sir John Moore, Dr. Adye-Curran, and Dr. Kidd.

On the motion of Dr. NORMAN MOORE, the following committees were also appointed:—

Pharmacopœia Committee:—The President (chairman), Dr. Norman Moore, Dr. Barrs, Sir John Moore, Sir G. Philipson, Sir Thomas Fraser, Dr. Little, Dr. Caton, and Dr. McVail.

Finance Committee:—Mr. Tomes (chairman), Mr. Morris, Sir John Tuke, and Dr. Little.

Dental Committee:—The President (chairman), Mr. Morris, Mr. Tomes, Mr. Hodsdon, and Sir Thomas Myles.

Dental Education and Examination Committee:—Mr. Tomes (chairman), Mr. Morris, Sir Thomas Myles, Dr. Knox, Sir Charles Ball, and Dr. Finlay.

Students' Registration Committee:—Sir Hugh Beevor (chairman), Dr. Norman Moore, Dr. Adye-Curran, Sir John Batty Tuke, Sir Christopher Nixon, and Dr. Mackay.

The Executive Committee.

The following were elected members of the Executive Committee: Dr. Norman Moore, Sir Hugh Beevor, Mr. Tomes, Dr. Langley Brown, Sir John Tuke, Dr. McVail, Sir John Moore, and Sir Charles Ball.

The Penal Cases Committee.

The Penal Cases Committee was elected, and consists of the following members: Dr. Saundby, Mr. Tomes, Dr. Finlay, and Sir C. Nixon.

Assistant Examiner in Surgery to the Apothecaries' Society.

On the motion of Sir HUGH BEEVOR, seconded by Mr. MORRIS, it was agreed—

That Mr. H. Stansfield Collier, F.R.C.S. Eng., be appointed assistant examiner in surgery to the Apothecaries' Society of London, vice Mr. McAdam Eccles, who retires by rotation.

Pharmacopœia Committee's Report.

The Pharmacopœia Committee reported to the Council as follows:—

From Nov. 23rd, 1908, to May 22nd, 1909, the number of copies of the British Pharmacopœia (1898) sold by the publishers was 482. The total

number of copies sold in the year beginning May 25th, 1908, was 1019. Up to the present time 40,788 copies of the Pharmacopœia, and 4449 copies of the Indian and Colonial Addendum have been sold. The stock of the Pharmacopœia now on hand consists of 2242 copies, together with 1885 copies of the Addendum. Valuable reports, containing suggestions for the better adaptation of the Pharmacopœia to local requirements in distant parts of His Majesty's dominions, continue to reach the committee from Government authorities outside the United Kingdom. These are in process of being analysed and incorporated in the tabular analysis prepared by the secretary, Dr. Tirard. The committee hope to hold a special meeting during the autumn, for the purpose of coming to a decision on certain points relating to the new Pharmacopœia, and in particular on the question of the omission or inclusion of the several articles dealt with in the returns supplied by the licensing bodies and other medical authorities at home and abroad.

On the motion of the PRESIDENT the report was adopted.

Students' Registration.

On the motion of Sir HUGH BEEVOR the report of the Students' Registration Committee on exceptional cases and on the approval of a certain recognised teaching institution was approved.

Finance.

The PRESIDENT moved the adoption of the Finance Committee's report, which stated that—

The income of the General and Branch Councils for the year ending Dec. 31st, 1908, was £8197 5*s.* 8*d.* and the expenditure £8853 18*s.* 6*d.*, leaving a deficit of £656 12*s.* 10*d.* In view of the fact that each of the three previous years showed a surplus, this is very disappointing, but the reasons were beyond the control of the Council. The General Council received £45 more for colonial and foreign registrations, but, with this exception, all the sources of revenue show a decrease, though the decrease is a small one. The branches received £290 less for registration, of which £259 was due to the falling-off in Scottish fees, those received by the Irish Branch being only £37 15*s.* less, while those in England were £5 14*s.* more. The total registrations were 1108 originals and 707 additionals, as against 1185 originals and 634 additionals in 1907. Turning to expenses, the increase of £93 in miscellaneous printing was due mainly to the report by the Unqualified Practice Committee, which occupied 208 pages and included some lengthy tables, and to the Education Committee's report as to the curriculum, which also contained many intricate tables. The addition of the press gallery accounts for the increase of £57 in alterations to buildings. The other chief items which show an increase were General Council fees, which were larger by £656; law expenses, £302; and miscellaneous expenses (including reporting penal cases), which showed an increase of £142. In the report by the committee on the year 1907 they expressed "the hope that unless the sessions are unduly and unexpectedly prolonged they may be in a position next year to present an equally favourable report." The sessions in 1908 occupied 13 days, as against eight days in 1907, and their extra length was entirely due to two penal cases. One of these occupied six and a half days and the other two and a half days. As the sessions cost about £200 a day in fees and hotel expenses, the cost to the Council on this account alone was £1650. To this has to be added the law costs, which include not only the preparation of the cases, but attendance during the hearing and the extra charges in connexion with a mandamus in the High Court, with consultations, &c. The law costs in all amounted to £346, to which may be added £136 for shorthand reporting and some £25 for printing. These two cases, therefore, cost the Council £2100, of which all but about £300 is included in the expenditure for 1908. Over these matters the Council has no control whatever; it must give a fair hearing to a practitioner charged with so grave an offence as "infamous conduct in a professional respect." But when the case is unduly protracted the financial results are disastrous, for had it not been for these abnormal cases there would have been a surplus for the year of about £1100 instead of a deficit of £650. The Dental Fund had no abnormal expenditure to meet and therefore has a surplus of £336 on the year's working. As regards the current year the three branch councils have incurred a considerable expenditure in revising the Medical Register, and the cost of alterations to the buildings will appear for the last time, but there is no reason to anticipate a deficit unless circumstances are more adverse than may reasonably be expected.

The report was adopted without discussion.

Examinations for the Services.

On the motion of Dr. MCVAIL the report by the Examination Committee on the returns as to examinations for the services received since the last session of the Council was approved.

Commissions in the Royal Navy.

Dr. MCVAIL submitted a table showing results of a competition held in May, 1909, for commissions in the Royal Navy and it was ordered to be printed in the minutes.

Dr. MCVAIL moved the following resolution, which was agreed to:—

That the thanks of the Council be conveyed to the Director General of the Navy Medical Service for the returns which he has again furnished to the Council, with the request that these returns may in the future continue to be furnished to the General Medical Council.

Public Health Diploma.

The Public Health Committee submitted the following report:—

The committee considered the following resolution of the General Council adopted on Nov. 28th, 1908:—

"That it be referred to the Public Health Committee to consider the advisability of substituting in Rule I. of the Resolutions and Rules relating to public health the words 'nine months' in place of 'twelve months' as at present."

The Public Health Committee is of opinion that it is not advisable to substitute in Rule I. of the Resolutions and Rules relating to public health the words "nine months" in place of the words "twelve months" as at present for the following reasons:—

1. The 12 months' curriculum was deliberately adopted by the Council after inviting and considering the views of examination bodies and a great number of teachers and instructors in the science and practice of public health.

2. The Diploma in Public Health is a higher and post-graduate qualification—one which has always been regarded in the light of an honours qualification—and therefore one calling for sustained study to be undertaken solely in preparation for it.

3. An interval of at least 12 months is commonly demanded by examining bodies between a pass examination and an examination for a higher qualification.

4. The existing scheme of the Council has worked well and successfully during many years. The Diploma has obtained for itself a high status.

5. Not long ago a representation was made to the Council as to disabilities in the matter of obtaining the Diploma in Public Health incurred by seniors in the profession, especially military and colonial officers serving abroad, the length of whose leave is not sufficient to allow them properly to undergo the prescribed course.

For such men, therefore, the Council has granted indulgence in individual cases, and, relaxing the requirement of 12 months, has permitted them to complete their course in nine months.

6. The proposal referred to this committee is to extend a like indulgence to quite junior candidates.

This proposal the committee disapproves, believing that it would be a retrograde step—one little likely to prove of advantage to the Public Health Administration of the United Kingdom and of the Empire.

The report also included a letter from the Assistant Military Secretary for India stating that the army in India was now organised in ten divisions, that the place of the Command Sanitary Officer had been taken by ten divisional sanitary officers, and requesting the Council to amend its rules so as to include the ten divisional sanitary officers in the list of recognised sanitary staff officers.

To this letter the Registrar sent the following reply:—

SIR,—With reference to your letter of April 21st, No. 4423, requesting that the "recognition" of the General Medical Council required under Rule 3 (f) of the Regulations for admission to examinations for Public Health Diplomas may be varied in the case of the Indian army so as to substitute the ten divisions of command newly organised, I am directed to draw your attention to a correspondence with the War Office which took place in 1903 and 1904. On Nov. 26th, 1903, an application was made for the recognition of certificates granted by the Sanitary Officer of the Bombay Command, and it was explained that the district included a civil population of 120,000. The Council recognised the Bombay command, and in notifying the War Office to that effect expressed its opinion that civil population should always be taken as a basis for D.P.H. instruction and that the population should always be at least 30,000.

This intimation by the Council appears to have been fully understood by the War Office, as on May 17th, 1904, when applying that the additional commands of the Punjab, Bengal, and Madras might be accepted by the Council, the extent of the civil population was definitely stated in each case and shown to be well over 30,000.

I am to point out that in the present application of your department this understanding arrived at with the War Office seems to have been overlooked or was unknown, for in two cases, those of Peshawar and Quetta, the civil population is below the recognised standard of 30,000 and the Public Health Committee of the Council, to whom the subject will be referred, will desire to know why the principle to which it attached so much importance in 1903 has been departed from.

As a correspondence with the India Office is proceeding the committee made no recommendation at the present juncture, although reaffirming the principle of taking the civil population as a basis for estimating the value of instruction in sanitary science.

Sir JOHN MOORE moved the adoption of the report. He said it was quite true that the curriculum for the Public Health Diploma could be completed in nine months, but it seemed to the committee that although that was the case there was no hardship on a candidate waiting for an additional three months before receiving this high qualification, even if it was only to digest the information he received during the nine months. He hoped nothing would ever be done by the Council to lower the status which their public health qualification had reached.

Dr. NORMAN MOORE seconded.

Mr. THOMSON said that he would like to make some remarks on the report. He thought that the committee had misunderstood the terms of the reference. If members of the Council would look to the resolutions and rules relating to public health, they would notice that Rule 1 stood apart from Rules 2, 3, and 4. Rule 1 was a statement to the effect that a period of not less than 12 months should have elapsed from the time of obtaining the registrable qualification and the admission of the candidate to any examination or any part whatever of the examination for the Diploma in Public Health, Sanitary Science or State Medicine. If they then turned to Rules 2, 3, and 4 they would see that the

curriculum was marked out and as the chairman of the Public Health Committee had himself admitted, this curriculum could be completed in nine months. He would ask the members now to look at the report of the Public Health Committee and he thought that there he got support for the view he took, because therein the committee stated that they had already considered the question of the reduction in regard to senior students. The committee said that it was not prepared to allow that reduction with regard to junior students. He had never applied for any reduction in the curriculum. What he did object to was this, that the Council having stated what the curriculum was had endeavoured to insist on a three months' period of enforced idleness. He would point out that this came at a period in a man's career when his time was of the greatest possible value to him. A young medical man having graduated was possibly anxious to go out to the colonies. He could take no better asset with him than a Diploma in Public Health. He might wish to waste no time. He could fulfil all the conditions in the curriculum of the Council in nine months, but he was debarred by what he (Mr. Thomson) considered a very foolish regulation from entering for the examination until a period of 12 months had elapsed since taking his degree. He thought that at present the Council was penalising such a man. The man did all that the Council required of him or was entitled to require of him. He could not see that it had any right to enforce periods of what at the older universities might be called residence. The Council in this manner penalised the man in money as well as in time. All that he would ask was that the man who had fulfilled all the conditions of the curriculum should be allowed to enter for the examination. Whilst he was prepared to admit that the Diploma in Public Health was a high distinction, he would point out that the Council had nothing to do with honours courses. It was said as the second reason in the report that it was in the nature of an honours qualification. The Council had nothing to do with honours qualifications. It had only to give a guarantee to the public that the men who took the Diploma of Public Health were adequately educated. He thought that he had made out his contention. In his own experience two cases had come before him where men had had an opening in the colonies waiting them, but they were detained in England by a resolution of the Council, which enforced a period of 12 months elapsing between the time of a man's qualifications and his entrance for the examination.

The PRESIDENT said that he remembered the circumstances better than most members which induced the Council to make a 12 months' interval between the first qualification of a man and the taking of the additional qualification. He would ask the Council to pause before altering that. The Council had a right to state precisely what the conditions for a registrable qualification in public health should be. These conditions had been elaborated by a series of distinguished hygienists. They had been formulated in precise terms and had been communicated to all the licensing bodies and universities with the intimation that these rules must be adopted by them as a part of their corporate regulations for the diploma. That had been done by a process extended in some cases over some years. These rules had been incorporated in the ordinances and regulations of various bodies. For that reason alone the Council should pause before it changed one of them. A second reason was that at first the curriculum which was necessary for the qualification was 12 months, and therefore the minimum period which must then intervene between the first primary qualification and the examination for the Diploma in Public Health corresponded to the length of the curriculum. There was no doubt that the curriculum to be carried out adequately still required 12 months. Owing to the pressure which had been brought to bear upon the Council, three months were allowed to be taken off the curriculum so as to make its total amount nine months. Nobody regarded that as an ideal arrangement. It was regarded as an exceptional arrangement. The idea that it was to become the normal length of the curriculum was repudiated by every member of the Council. To make nine months the normal length of the curriculum now would be a great disaster. The ideal course was one where a man had six months of laboratory work and six months outdoor sanitary work. Therefore, he thought that the Council ought not to alter the requirement which was embodied in their rules by the universities and corporations after grave consideration, and, further, the Council ought to insist on the fact that if a man could give 12 months to the work for his D.P.H. he was not doing a bit too much. The value of this diploma had been recognised owing to the effect of this course of study, but also owing to a certain maturity of mind and experience which had come in the process of obtaining the additional qualification. It had been said that the Council had nothing to do with honours, but this diploma was in reality a post-graduate qualification. It might be called an honours qualification. It was certainly a qualification higher than that of the ordinary medical qualification.

Sir JOHN TUKE protested against the continuous attempts to whittle down the original rule. For consistency's sake he must vote for the report.

Sir C. NIXON expressed sympathy with Mr. Thomson in the remarks he had made. In Ireland the majority of men who undertook the duties of medical officers of health had got no diploma in public health at all, although they had a fair amount of instruction in the principles of public health. When they considered how much time was required to obtain a degree in medicine and surgery there was a disproportionately large amount of time exacted from the men seeking the diploma in public health. The President had referred to men having to take a practical course of six months and a course of out-door instruction of six months. There was no reason why part of these courses should not be taken at the same time or why candidates should not obtain everything that was required from them in nine months. It was a hardship to men who were sufficiently able to pass the examination to keep them some time doing nothing before they presented themselves. When the Council bore in mind that this diploma was sought by men who were anxious to get public positions in the colonies they would see that it was a hardship to require them to spend 12 months in doing work which they could do perfectly well in the shorter period of nine months.

Sir CLIFFORD ALLBUTT hoped there would be no ornamental delay in giving this qualification. If it was to be a 12 months' instruction let it be 12 months. If it was to be nine months he hoped they would not add any ornamental months for the sake of making the curriculum appear to be longer than it really was. He was inclined to think that 12 months were not too long, but if the work could be done in nine months he hoped three unnecessary months would not be added.

Sir CHARLES BALL said that the reason why overlapping had been allowed at all in reference to the diploma of public health was because there was great hardship inflicted on military medical men and others coming from India and abroad by the insistence on the full 12 months' curriculum. They usually only got a year's leave. Part of that time had to be spent coming from, and going to, India or other places abroad. They had not the requisite 12 months at their disposal for the completion of the curriculum. It was felt to be a great hardship that those men were precluded from taking a diploma of public health during their vacation. It was to meet these cases that the existing regulation was adopted. It was not intended that it should apply to candidates who had just taken their qualifications.

Dr. MCVAIL observed that he had been a member of the Public Health Committee since it was instituted. Its first chairman absolutely objected to any lowering of the curriculum or any shortening of the time. The next chairman was Dr. Bruce (Dingwall) who had a long and close connexion with the work of public health in the north of Scotland. He also objected to any lowering of the curriculum. Now Sir William Power, who was certainly an authority greater than any other individual authority in this country, was the chairman of the committee. He absolutely objected to the suggested change. Every day of 12 months was required to do justice to the course. In fact, it was all too short when it was considered what had to be done. It was not merely the work of going to a class-room or to a laboratory that was required; it was requisite to get the subject woven, as it were, into the mind of the aspirant for the diploma. The famous medical officer of health of Glasgow, Dr. Russell, held very strongly in his time that six months was the very shortest time in which a man could become practically acquainted with the working of a public health office in a town after he had completed whatever laboratory or

theoretical teaching was required. He remembered, too, that Sir John Simon defended this view. It was largely owing to Sir John Simon that the Diploma of Public Health was instituted, and it was undoubtedly owing to him that the Council got complete control of it. He held that it was not to be a mere slight addition to the knowledge of hygiene that a man acquired in an ordinary medical course. It was to be altogether something special, something quite on a different plane altogether. Everyone connected with public health whom he knew would entirely object to the shortening of the time which must elapse before the diploma was granted. If the time was whittled down to nine months there was little between that period and six months. It would then become a diploma which every medical student might take. He spoke for every member of the Public Health Committee when he said that they entirely objected to anything that would lower the amount of work which was required for it. The amount of work which students did working with medical officers of health should be increased rather than diminished. Sir Charles Ball had explained how the nine months were introduced into this matter. It was with great unwillingness that the chairman of the Public Health Committee of that day, and the members of it, agreed to the introduction of the nine months. It was introduced on the understanding that it was to apply to medical men coming from abroad alone. It was only on account of the necessities of the public service that the committee consented to the concession. Therefore the Council ought not to extend the concession, to which he objected on the grounds of the public interest.

Sir THOMAS MYLES expressed sympathy with the motion of Mr. Thomson. Dr. McVail had said that the nine months concession had been made for the medical man whose work lay abroad. However, it was the case that the man who had spent 20 years abroad had had no opportunity of acquainting himself with modern conditions of work bearing on public health. On the other hand, an enormous amount of public health work was done in the hospitals. The modern student had a very good training in clinical bacteriology and chemistry. This student was to be penalised. The man who had been in the bush in India was to have the advantage of the three months' concession. The case of a young graduate could not be ignored from the monetary point of view. He was bound to be spending money in order to defray his cost of living during the three months. He would join his voice in the protest against any ornamental additional to the time. His objection was to the existence of any ornamental portion of the curriculum.

Sir THOMAS FRASER said it would be extremely unfortunate if at this time the Council reduced the qualifications for this important branch of the profession. They in the north would deprecate any lowering of the standard in this respect.

Mr. THOMSON then moved as an amendment that the report be referred back to the committee. He emphasised the point that it was not his intention to lower the standard. It had got nothing to do with the standard; it was plain, straightforward common sense. If the course could be done in nine months the members of the Council need not demand 12. He knew from those with whom he had discussed the matter that the men found the delay hang heavy on their hands. He should like to have some definite statements with regard to what were the requirements of the six months at the laboratory. Was a man to attend during all the hours of every day? For the reason that he believed the curriculum could be done in the shorter time he thought the men who were taking the diploma had just cause of complaint.

Sir C. NIXON formally seconded the amendment.

Sir JOHN MOORE remarked, in replying to the discussion, that it was a very remarkable circumstance that everyone who was opposed to the adoption of this report was not the holder of a diploma of public health. He himself happened to be the oldest Diplomate of Public Health. He strongly held that the nine months' period was too short. The circumstances which had been revealed by the debate showed now unfortunate it was that any diminution in the Council's requirement should have been made in the case of army medical officers. Sir C. Nixon had quite unconsciously misled the Council a little when he spoke of the position of medical officer of health in Ireland and its requirements. The dispensary medical officers were forced by Act of Parliament to be the medical officers of health for their respective districts. In no instance was it necessary for them to have the additional qualification. When a medical man sought the post of medical officer of health for a district with a population of not less than 50,000 he must produce the additional qualification. He believed that for such a man even 12 months were too short to put him in a position to do his work thoroughly. Sir Thomas Myles had spoken of the clever young student being penalised. The Council was not penalising anybody. It merely wanted to secure that a man should spend 12 months in the study of public health. If the curriculum was completed in nine months after the ordinary medical degree had been obtained the young medical man had time left to prepare for his examination. No man after he took the final examination in his medical course did start studying for the Diploma in Public Health at once. He generally went off on holidays or took six weeks off at Christmas. Thus there might be three months taken away from the 12. It had been remarked in the course of the debate that students were taught bacteriology and chemistry. The students were taught chemistry in their first year and their knowledge of bacteriology was, on the authority of the Council's examiners, often deficient. He hoped that the Council would reject the amendment by an overwhelming majority.

Sir C. NIXON asked leave to make one observation before the amendment was put from the chair. He drafted the syllabus of the curriculum for the Royal University of Ireland and it was adopted. The idea in the mind of the University was that there ought to be two grades of diploma established in connexion with it—a lower grade of diploma representing the requirements of the Council, which would be quite sufficient for the ordinary class of medical officers, and a higher grade of degree, a Doctorate of Public Health. The latter would be specially applicable to public health officers charged with the care of a population of 50,000 or more. He thought that the Council in making regulations for its diploma ought not to be too exacting. It ought to legislate for the rank and file of the profession and not set up an impossible standard. He was satisfied with the requirements necessary in the nine months' curriculum.

The amendment to refer the report back to the committee was lost by a large majority and the report was adopted.

Penal Cases.

Penal cases occupied the rest of the sitting.

The Council resumed consideration (adjourned from Nov. 27th, 1908) of the facts proved against William John Watson, in regard to whom the Dental Committee at its meeting on May 24th, 1909, drew up a supplementary report. In it is stated that the committee find upon the evidence that:—

An unqualified man named Herbert Arthur Frank Potter, who had for some years been in the employment of, and represented himself to be, the said William John Watson, attended a patient of the said William John Watson in November, 1908, but he did not actually perform a dental operation, and the charge made against the said William John Watson of covering an unregistered practitioner was not proved to the satisfaction of the committee, nor was the charge of advertising in the name of another practitioner brought home to the said William John Watson. On the other hand, no evidence other than his own statement was presented to the Committee as to the conduct of the said William John Watson since the matter was before the Council at their session in November last. It was not alleged that any advertisements had been issued by the said William John Watson in the interval. The committee cannot regard the evidence presented by the said William John Watson as to his conduct in the interval as satisfactory, seeing that he had still some connexion with the said Potter, who to his knowledge was in the employment of a company called Booth and Co., Ltd., consisting of unqualified persons who continued to advertise from the addresses where Mr. Watson formerly carried on business.

Mr. WATSON attended in answer to his notice, but he was not accompanied by counsel or solicitor.

The complainants (the British Dental Association) were represented by Mr. R. W. Turner, instructed by Messrs Bowman and Curtis-Hayward.

Mr. WATSON made a statement on his own behalf and said that he was only anxious to clear himself of this charge. He admitted that he had committed an error of judgment in this case. He would take care not to repeat it.

After deliberation *in camerâ*,

The PRESIDENT said: Mr. Watson, the Council has again given careful consideration to the two reports of the Dental Committee, and has deferred the further consideration of your case to November next, when you will be required to be present in person and to produce satisfactory evidence, and

not merely a personal statement, as to your professional good conduct in the interval, with particular reference to your undertaking to discontinue all advertising or connexion, direct or indirect, with those who are advertising.

The Council passed to the consideration (adjourned from Nov. 27th, 1908) of the facts proved against Charles Morgan, in regard to whom the Dental Committee at its meeting on Monday, May 24th, 1909, drew up a supplementary report.

In the supplementary report the committee found upon the evidence that:—

Notwithstanding the undertaking given by the said Charles Morgan to discontinue all advertisements, the said Charles Morgan has continued to advertise on the curtain of the Empire Theatre, Newport, his name, address, qualifications, and prices, and that advertisement is still appearing. This advertisement has appeared in pursuance of a contract entered into by the said Charles Morgan with the London and Provincial Advertising Agency, Limited, of 110 and 111, Strand, London, dated July 6th, 1908, by which the said Charles Morgan agreed to take three spaces on the advertisement curtain at the Empire Theatre, Newport, for one year at 5s. per week. The contract provides for alterations at the expense of the advertiser on payment of an extra fee, but provides that the order is not subject to countermand. No evidence was given of any written application to the advertising agency to discontinue the advertisement or of any serious attempt to put an end to it by the said Charles Morgan.

Mr. Morgan attended in answer to his notice, accompanied by Mr. Arthur P. Poley, his counsel, instructed by Mr. H. Morgan Rees, solicitor, Cardiff.

The complainants were the British Dental Association and were represented by Mr. R. W. Turner.

Mr. POLEY stated on Mr. Morgan's behalf that a letter had been received from the secretary of the London and Provincial Advertising Agency, Limited, consenting to withdraw the advertisement from the curtain at the Empire Theatre, Newport, on certain terms, and asked that the Council would postpone judgment for six months in order that Mr. Morgan might have an opportunity to show that this had been done.

After deliberation *in camerâ*,

The PRESIDENT said: Mr. Morgan, the Council has again given careful consideration to the reports of the Dental Committee, and has deferred the further consideration of your case to November next, when you will require to be present and to offer satisfactory evidence other than your own statement as to your professional good conduct in the interval, with particular reference to your promise to discontinue the issue, direct or indirect, of all advertisements.

The Council then considered the report of the Dental Committee on the charge against Samuel David Davis. The committee found that the following facts were established by the evidence:—

The said Samuel David Davis was registered in the Dental Register on Oct. 9th, 1878, as "in practice before July 22nd, 1878." His address in the Register for 1909 is Beech House, 66, Queen's-road, Wisbech. The said Samuel David Davis entered into an agreement on the 26th of July, 1906, with F. W. Bradley, Ltd., acting by Frederick William Bradley, the chairman of the company, to serve the company as dentist and general assistant at Wisbech and at such other places as the company might determine. The said Samuel David Davis undertook by that agreement to devote his whole time to such service and to carry out the directions of the said F. W. Bradley or other the directors of the company. The remuneration paid by the company to the said Samuel David Davis is £4 4s. a week and 5 per cent. commission on all cash received in respect of orders taken by him. F. W. Bradley, Ltd., is a company incorporated under the Companies Act to take over and carry on a dental practice formerly carried on by one, Frederick William Bradley, at 6, Market-street, Wisbech, the Castle, Wisbech, and numerous branches in the eastern counties. The capital of this company is £20,000, the whole of which was issued as fully paid up, and no part of which was paid up in cash; 19,733 £1 shares are owned by the said F. W. Bradley, 101 by Mary Bradley, his wife, 101 by William Wade Langley, a brother-in-law of the said F. W. Bradley, and the remaining 65 by 13 other persons. Frederick William Bradley is chairman and managing director of the company, the other directors being the said Mary Bradley and W. W. Langley. Neither the said F. W. Bradley nor any other director or shareholder is a registered dentist. Until April 15th, 1909, the business at 6, Market-street, Wisbech, was carried in the names of W. Foot, surgeon-dentist, and Claud L. Sutton, surgeon-dentist. These persons are registered dentists, but neither of them has practised in Wisbech for a long time, and the business is in fact carried on under the management of the said F. W. Bradley by the company. The said F. W. Bradley purchased the dental practices of both these persons and the right to use their names and transferred the same to the company. The company has 23 branches. All fees paid by patients are paid into the company's banking account. The said Samuel David Davis and Frederick Joseph Whitehead are the only registered dentists employed by the company except one at Yarmouth, all the other persons engaged in carrying on the business being unregistered. The said Samuel David Davis took his instructions as to the branches at which he was to attend, and when he was to attend there, from the said F. W. Bradley. The said Samuel David Davis knowingly and wilfully assists the said F. W. Bradley in carrying on practice as a dentist at Wisbech and elsewhere under the names or styles of W. Foot, surgeon-dentist, Claud L. Sutton, surgeon-dentist, and F. W. Bradley, Limited. The said Samuel David Davis also knowingly and wilfully assists the said company in carrying on practice as dentists at Wisbech and elsewhere by means of unregistered persons in their employ.

Mr. Davis appeared in person.

The complainants, the British Dental Association, were represented by Mr. R. W. Turner.

Mr. DAVIS, addressing the Council, expressed his great regret and sorrow if he had done anything illegal.

After deliberation *in camerâ*,

The PRESIDENT said: Mr. Davis, I have to inform you that the Council have given careful consideration to the report of the Dental Committee and that they have judged you to have been guilty of infamous and disgraceful conduct in a professional respect and have directed the Registrar to erase from the Dentists Register the name of Samuel David Davis.

The Council then took up the consideration of the case of Frederick Joseph Whitehead, which had been referred to the Dental Committee. The committee found that the following facts were established by the evidence:—

The said Frederick Joseph Whitehead was registered in the Dental Register on the 31st of December, 1878, as "in practice before July 22nd, 1878." His address in the Register for 1909 is Market-street, Wisbech, Cambs. The said Frederick Joseph Whitehead knowingly and wilfully assisted an unregistered person, named Frederick William Bradley, to carry on practice as a dentist at Wisbech and elsewhere, under the names or styles of W. Foot, surgeon-dentist; Claude L. Sutton, surgeon-dentist; and F. W. Bradley, Limited—the said F. W. Bradley, Limited, being a company of which the said Frederick William Bradley had control as chairman and managing director, and who held 19,733 shares out of a total of 20,000. No director or shareholder of the company is a registered dentist. The said Frederick Joseph Whitehead also knowingly and wilfully assisted the said company in carrying on practice as dentists at Wisbech and elsewhere by means of unregistered persons in their employ.

Mr. Whitehead did not attend nor was he represented by counsel or solicitor.

The complainants, the British Dental Association, were represented by Mr. R. W. Turner, instructed by Messrs. Bowman and Curtis-Hayward, solicitors.

The Council deliberated on the case *in camerâ*.

When the public were readmitted the PRESIDENT said: I have to announce that the Council have given careful consideration to the report of the Dental Committee and have judged Mr. Frederick Joseph Whitehead to have been guilty of infamous and disgraceful conduct in a professional respect and have directed the Registrar to erase from the Dentists Register the name of Frederick Joseph Whitehead.

The case of Reuben Davis was next considered, in which case the Dental Committee had reported as follows:—

The said Reuben Davis was registered in the Dentists Register on Dec. 31st, 1878, as "in practice before July 22nd, 1878," and his address in the Register for the current year is Boston, U.S.A. The committee find that the following facts were established by the evidence: That on April 16th, 1908, the said Reuben Davis was convicted at the Bath Petty Sessions of stealing 12 pairs of forceps and was sentenced to three months' hard labour. That on Sept. 2nd, 1908, the said Reuben Davis was convicted at the Gloucester Petty Sessions of stealing a watch, money, &c., and was sentenced to two months' hard labour. That on Dec. 31st, 1908, the said Reuben Davis was convicted at the Wigan Petty Sessions of stealing one shirt, two collars, one front, four collar fronts, and one pair of cuffs, and was sentenced to 14 days' imprisonment. The evidence before the committee consisted of certified copies of the several convictions.

Mr. Reuben Davis did not attend nor was he legally represented.

The Council having deliberated *in camerâ*,

The PRESIDENT said: I have to announce that it having been proved that Reuben Davis has been convicted of various misdemeanours as set forth in the report of the Dental Committee, the Registrar has been directed to erase from the Dentists Register the name of Reuben Davis.

The Council then proceeded to the consideration of the case of Stanley Bennett Wakefield. In this case the Dental Committee submitted the following report. The committee found that the following facts were established by the evidence:—

(1) That on the 6th October, 1908, the said Stanley Bennett Wakefield was convicted at the Marlborough-street police court of illegal pawning; that he was fined 40s. and 12s., the value of the pawned goods, or in default of payment, 21 days' imprisonment, and that he was imprisoned in default of payment. (2) That in the month of September, 1908, the said Stanley Bennett Wakefield, in answer to an advertisement issued by the executors of one William Jones, deceased, sent in a claim for £12 12s. for professional services alleged to have been rendered to the deceased between the 26th of September and the 11th of October, 1907. (3) That the said Stanley Bennett Wakefield never attended the said William Jones, and the claim was in fact a false and fraudulent claim.

Mr. Wakefield did not attend nor was he represented by counsel.

The complainants (the British Dental Association) were represented by Mr. R. W. Turner.

The Council having deliberated *in camerâ* the PRESIDENT announced the decision of the Council as follows: "I have to announce that it having been proved that Stanley Bennett Wakefield has been convicted of a misdemeanour the Registrar has been directed to erase from the Dentists Register the name of Stanley Bennett Wakefield."

The Council thereafter considered the case of Thomas Parkins. The report submitted by the Dental Committee was as follows:—

The committee find that the following facts were established by the evidence. The said Thomas Parkins was registered in the Dentists Register on Dec. 30th, 1878, as "in practice before July 22, 1878." The address in the Register for 1909 is 1, Bexley-square, Salford, Manchester. The said Thomas Parkins lives at Salford, but a dental practice is carried on in his name at Sharrow Head House, Sharrow Head, Sheffield, by his son Charles Henry Parkins, who is an unregistered person who habitually performs dental operations there and signs receipts for accounts paid by patients for work done by him in the name of the said Thomas Parkins.

Mr. Parkins attended in person.

The complainants (the British Dental Association) were represented by Mr. R. W. Turner.

Mr. PARKINS addressed the Council. The business he had conducted, he said, was his own. He admitted his son assisted him in the business under his supervision. He had been teaching his son the business for the last four or five years. He was very sorry the complaint had been made against him. He was totally ignorant of the fact that he was doing anything wrong by employing his son to assist him.

The Council having deliberated *in camerâ*,

The PRESIDENT said: Mr. Parkins, I have to inform you that upon the facts found in the report of the Dental Committee the Council have judged you to have been guilty of infamous or disgraceful conduct in a professional respect and have directed the Registrar to erase from the Dentists Register the name of Thomas Parkins.

Mr. PARKINS: I am sorry to hear that. I think at my time of life it is rather cruel after having been on the Register since the passing of the Act. Is that the best or the worst you can do for me? I feel it very much. Excuse me, gentlemen, making these remarks. I never knew I was doing any wrong. I was totally ignorant of it. I have had a large family to bring up and I have had a great deal to do. It is very hard on me to be removed from the Register now—very hard indeed. You might have allowed me to have one place open.

The PRESIDENT: The case is now closed.

Mr. Parkins then left the Council Chamber.

The Council then considered the case of Thomas Torrens McKendry, registered as of 39, Wellwood-road, Goodmayes, Ilford, Essex, M.B., Bac. Surg., 1894, R. Univ. Irel., who was summoned to appear before the Council on the following charge as formulated by the Council's solicitor:—

That you have knowingly and wilfully on various occasions, and in particular on Feb. 20th, 1909, assisted one E. C. Dalby, a person not registered as a dentist, in carrying on practice as a dentist by administering anæsthetics on his behalf to persons coming to him for treatment and that in relation thereto you have been guilty of infamous conduct in a professional respect.

Dr. McKendry attended in person.

Mr. Chatelain, the complainant, also attended and called evidence.

Mrs. FLORENCE JANE CHATELAIN, wife of the complainant, said her husband received information to the effect that Dr. McKendry was giving an anæsthetic to a Mrs. Flynn. Witness proceeded to Dalby's house and saw both Dr. McKendry and Mrs. Flynn leave. She knew that Dr. McKendry was not Mrs. Flynn's usual medical adviser.

Mr. WILLIAM RAYMOND BRYAN, secretary to a company, said he had heard that Dr. McKendry had given an anæsthetic in Dalby's house.

Mr. LUSHINGTON: But do you know anything about it except what you have been told?—No.

Did Dr. McKendry tell you?—No.

Mr. CHATELAIN read a declaration by Mr. Richard Henry Stevens, L.D.S. R.C.S. Eng., a registered dentist of Ilford, who said he had warned Dr. McKendry against assisting Mr. Dalby by giving anæsthetics to his patients.

Dr. MCKENDRY made a statement that he gave gas on the particular occasion alluded to. He was medical adviser to the family of Mr. Dalby, and on one occasion when he visited Mr. Dalby's house he was suddenly asked to give the gas. He was taken by surprise, and, without reflection, unfortunately he did it. He had afterwards told Mr. Dalby that he was annoyed at him for asking him to do this.

After deliberation *in camerâ*,

The PRESIDENT said: Mr. McKendry, the Council has found that the facts alleged against you in the notice of inquiry have been proved to its satisfaction. Before we proceed to judgment we understand you may desire to make some appeal to the Council, and therefore I now give you an opportunity of saying something before the Council proceeds to the next step of pronouncing judgment.

Dr. MCKENDRY expressed his very great regret. He was extremely sorry at what had taken place. He gave the Council an assurance that he would never again transgress against the resolutions of the Council in regard to the administration of anæsthetics for unregistered dentists.

After a further deliberation *in camerâ*,

The PRESIDENT said: Mr. McKendry, the Council has postponed judgment until the November session, when you will be required to attend in person and to produce evidence, more particularly from medical colleagues in your neighbourhood, as to your professional good conduct generally in the interval, and in particular that you have not repeated the offence of which complaint has been made.

The Council adjourned.

SATURDAY, MAY 29TH.

The Council resumed its sittings to-day at its offices, 299, Oxford-street, W. Sir DONALD MACALISTER, the President, was in the chair.

A Committee on Anæsthetics.

On the motion of the PRESIDENT, it was agreed—

That a committee be appointed to consider the proposals for legislation on the subject of anæsthetics which have been or may hereafter be put forward, to make such representations on behalf of the Council, to the authorities concerned, as may be deemed necessary, and to report to the Council on the position of the subject at the November session. That the committee consist of the President, Mr. Morris, Mr. Tomes, Mr. Hodsdon, and Sir Charles Ball.

The Council then adjourned until Tuesday, June 1st.

Looking Back.

FROM

THE LANCET, *SATURDAY*, June 4th, 1831.

There was presented also a case of

PALSY OF THE WRISTS FROM LEAD.

The case was precisely like others that I have alluded to, in the course of the winter, in its symptoms; and it was cured in the same way—by the application of electricity. I never had recourse to electricity in this complaint before this winter, and I certainly have had every reason to be satisfied with it. The man got so well in a short time that he felt able to go to his work, and had no desire to stay here any longer; indeed I believe I may say he got perfectly well. The electricity was diligently applied every day to the wrists, and in the form of sparks. I believe I mentioned before that one man in the hospital satisfied himself that sparks did much more good than shocks in his case. This man was admitted on the 3d of February. He had been working among white lead for nine weeks; his wrists had been paralysed for a fortnight; he was in a few days better. On the 11th he was much better; and on the 17th March he was presented perfectly well.[1]

USE OF THE WHITE AGARIC IN NIGHT PERSPIRATIONS.

DR. BURDACH, of Triebal, has confirmed the opinion, that the white agaric possesses in small doses the property of arresting excessive nocturnal diaphoresis. It is best given to the extent of from four to six grains in the evening, and it may be repeated in the day-time, if the patient be not of an irritable habit. It may be given in the form of a bitter extract made into pills. It has also been successfully used in habitual diarrhœas, in combination with alumn or kino.

[1] Excerpt from Clinical Lecture delivered at St. Thomas's Hospital by Dr. Elliotson on March 21st, 1831.

THE LANCET.

LONDON: SATURDAY, JUNE 5, 1909.

The Report of the Education Medical Officer of the London County Council.

THE important and highly practical question of the provision which must be made for the effective treatment of the diseases of school children should rapidly become ripe for complete solution, so various and numerous are the aspects from which it is being observed; and the considerations with regard to it which we have from time to time put forth, or which have been suggested by correspondents, can now be reviewed by the light of an official report of a highly interesting and instructive character, which has been made to the Education Committee of the London County Council by its medical officer, Dr. JAMES KERR. This report covers a period of 21 months, having been carried beyond the ordinary annual limit in order to bring it into unison with the reports of other authorities, and hence it extends from March 31st, 1907, to Dec. 31st, 1908. It shows that at the end of 1908 the medical staff of the Council numbered 52. In addition to Dr. KERR himself there was an assistant medical officer giving his whole time, there were two assistants giving half-time, and eight giving quarter-time, of whom three were women. The statutory medical inspections were carried out by a temporary staff of 16 school doctors, each in charge of a district, and having one or more assistant school doctors, of whom there are 24. It has been decided to increase the staff by the addition of 16 assistant school doctors in the summer and by another 16 in 1910, so that ultimately there will be 72 members of this temporary staff giving quarter-time, and each appointed for a term of three years. For the routine inspection the teachers are asked to name all the children who are known to them as presenting any abnormality except defective vision; and the doctor sees these children and notes any cases presenting defects of hearing, brain, speech, limbs, or nutrition, and leaves a card with the teacher for each child requiring treatment. The doctor then goes over the school and notes its general condition and that of the children, the hygiene of the work, and any other matters which affect the health of either teachers or scholars, as well as the general development of the latter. The routine with regard to the eyesight of the children may be specified to show the thoroughness of the procedures employed. The vision of all the children is tested once in 12 months, in one-half of the schools in April, and in the other half in September. The preliminary test is done by the teacher, and the names of all children in Standards I., II., III., and IV. whose vision is $\frac{6}{12}$ or worse, and of children in standards V. and above, whose vision is $\frac{6}{12}$ or worse, are placed on a form provided for the purpose. When the doctor visits the school he examines these children and gives the teacher a red or a green card, according to the amount of defect, for each child who should seek advice. These cards are at present distributed to the children a few at a time, "so as not to cause inconvenience to the hospital authorities," a striking commentary upon the suggestion that these same hospitals might deal with the cases collectively.

The general results of the medical examinations are stated in respect of two periods, one of 12 months from April 1st, 1907, to March 31st, 1908, the other of nine months, from April 1st to Dec. 31st, 1908, and it is not quite clear to what extent the figures may cover the same children. During the first period there were 270,749 children on the roll, and during the second 112,635; but it does not appear whether a correct total for the whole period would be reached by adding these figures together. In respect of the morbid conditions found, however, the totals may almost certainly be added, and they come out as follows. 50,422 children were specially examined and 3601 were reported by their teachers on account of defective vision (apart from the results of the general vision testing mentioned above), 3137 on account of defective hearing, 2356 for imperfect speech, 6278 for physical and 2406 for mental defect. Of these totals the doctors reported that 11,678 children "required treatment urgently" and that 886 required "transference to a special school." During the same period 4022 children were selected individually from their classes and reported on for external (and presumably in many cases infectious) diseases of the eye, 5552 for throat or nose affections, 1698 for ear disease, 306 for "excessive dirt," and 2713 for "other defects." The results of the systematic vision testing are rendered somewhat difficult to analyse by the fact that they also deal with two successive periods which must to some extent embrace the same children, and we will therefore refer to the second period only, the last nine months of 1908. In the returns for this period the higher elementary schools are included, and the figures embrace 313,415 children, of whom 29,326 were reported as having defective sight by their teachers, whose opinions in 20,584 of the cases were confirmed by the ophthalmic surgeons. Dr. KERR estimates the number of cases of defective sight among the whole of the London school children at about 60,000. He also declares that there is a great prevalence of dental caries, for the treatment of which the existing provision is wholly inadequate; that nearly 3000 children are suffering from ringworm, with a consequent loss of some £6000 a year in grant; and that about 7500 children are suffering from suppurating or discharging ears, a condition which, if neglected, frequently produces deafness or defective hearing, and sometimes consequences dangerous to health or life. He also points to a large number of children living in insanitary conditions and to numerous cases of tuberculosis (numerous in the aggregate but not when regarded as a percentage of a vast crowd), in which the consequent debility renders the pupils unable either to profit by instruction in school or to continue their attendance without further deterioration.

In view of the mass of disease and misery thus disclosed to view, it is obviously impossible for the community to rest content with a policy of inaction or with anything short of an endeavour to rescue as many as possible of these poor children from the dangers by which they are surrounded, and which are increased to an indefinite degree both by the aggregation which the maintenance of the school system requires and, especially in the case of defective vision, by the very processes of teaching. The children have a definite moral right to be protected against injury forced upon them under the form of benefit; and, both for their own sakes and for the sake of the generation in which they will eventually take their places as mature elements, it is necessary that the physician should play his part, and equally necessary that in so doing he should receive the hearty coöperation of the teacher. Dr. KERR assigns weighty reasons for his belief that the necessary protection can only be afforded by placing the whole life of the child during school age, say from three to 15, under the control of a wisely guided education authority, by which all relating to the feeding, teaching, cleansing, medical treatment, or social protection of children, when these matters become a public care, would be administered, and by which the overlapping of authorities, with its consequent costliness and inefficiency, would be avoided. It is manifest, even from the figures which we have quoted, that the medical treatment is an immediately pressing matter, and we have already referred to the apprehension expressed by many correspondents that an attempt would be made to throw this work upon the hospitals and to add to the existing "abuses" of these institutions a new one which would cast all others into the shade. We are informed that certain London hospitals have already been approached by the London County Council and are even now coquetting with that body in the hope of effecting some "arrangement"; and we hear also that a prospect of pecuniary subsidies has been held out to the hospitals in question. Some day, perhaps, we may come to the municipalisation of the hospitals, and then if the community benefits the medical profession may expect to benefit in proportion. But we have not yet arrived there, and it is the duty of our hospital authorities to protect the charities and the medical profession from exploitation. The matter is one on which the opinion of the medical profession will, we think, be unanimous, and we hope that the staffs of the great hospitals will lead the way in giving expression to that opinion and in emphatically declining to lend themselves to any premature scheme. The necessity for systematic medical care of the children has largely arisen from Parliamentary enactments, the full effect of which, it may be freely admitted, was not foreseen by those who passed them, but for which, nevertheless, the nation is responsible in such a sense that it should not be permitted to cast the consequent cost upon the shoulders of charities maintained by voluntary contributions for the accomplishment of totally different purposes. The business of our great voluntary hospitals is to deal with severe disease or accident among the poor, to promote the growth of medical and surgical science, and to afford the conditions necessary for the conduct of medical education. To employ hospital officers in the routine treatment of thousands of cases of school illness would be to divert them from their proper duties, and cannot be done without serious injury to science and to the public. The medical profession has a distinct claim to receive suitable recompense for the work; and the endeavour to cast it upon the already over-burdened and often inconveniently situated hospitals needs only to be understood in order to be condemned. There is no doubt, however, that such an endeavour has at least been in contemplation, and the profession should lose no time in expressing its views upon the subject.

The Early Recognition of Uterine Cancer.

THE Council of the British Medical Association has recently approved of appeals to promote the earlier recognition of cancer of the uterus being issued to medical practitioners and to midwives and nurses. In these appeals, which were published in the issue of THE LANCET for May 15th, p. 1408, the fact is pointed out very strongly that cancer is at first a purely local disease and one curable by operation. The responsibility which a medical practitioner incurs if he fails to make a physical examination in any case presenting symptoms of cancer is very great, and the treatment of such symptoms without an examination is quite unjustifiable. Unhappily, in only too many of these cases the fault lies with the patients themselves. It is not that the medical man fails to recognise the presence of the disease, but that the patient postpones seeking medical advice until all possibility of the complete removal of the growth has gone. The results which recently have been obtained by the adoption of the more radical and extensive method of removal of the uterus by the abdomen are most encouraging. Not only has the percentage of operable cases increased to a very marked degree, but the total number of cases cured—that is, which remain free from recurrence after five years—is very striking. If it were possible to ensure that all women who present any symptoms of uterine cancer should seek medical advice at the very earliest opportunity after the appearance of such symptoms, there can be no question that even better results could be obtained. Whatever the future may have in store with regard to other possible means of treating or of preventing cancer, the removal of the growth by operation is often the only method of cure applicable at the present time.

The crusade which has been carried out in Germany for the purpose of disseminating amongst the laity a better knowledge of the early symptoms of this dread disease has met with most encouraging results. Unfortunately, in this country the method which the German authorities have adopted of publishing short paragraphs in the lay press, for the purpose of instructing all women in the early symptoms of uterine cancer, is quite impracticable. In these circumstances the plan adopted by the Council of the British Medical Association in issuing appeals addressed to medical men, and more particularly to midwives and nurses, is no doubt the best that can be devised. At the same time we cannot but regret that the committee appointed by the

Association did not see its way to adopt some means by which a knowledge of the very important facts contained in the appeals could have been brought to the notice of the public. It has been urged as an objection that any attempt to sow broadcast such a knowledge of the early symptoms of cancer of the womb would cause an unnecessary and painful feeling of anxiety to a large number of women. We do not think, however, that such an objection should be allowed much weight. It would be far better that even a large number of women should seek medical assistance unnecessarily in the fear that they may have cancer, than that, as happens at the present time, a still larger number should delude themselves with the hope that the symptoms they are suffering from are of no importance. It would be well if the practice adopted by many foreign and American obstetricians of making a local examination of all their patients before ceasing attendance upon them after a confinement was more commonly carried out in this country. We know that the making of such examinations, the immediate utility of which is not apparent, is a matter of much difficulty, and the adoption of any practice which would in the least tend to lessen the feeling of modesty would be most deplorable; but at the same time the price which many unfortunate women in consequence are compelled to pay is a very heavy one. Their condition is not realised until too late. The recognition of the very earliest signs of cancer of the neck of the uterus is, in particular, of the utmost importance because of the anatomical relations of this portion of the uterus. In the most favourable circumstances, and by the most extensive operation which it is possible to practise, the amount of healthy tissue beyond the limits of any growth in this region which can be removed is necessarily limited. The very close anatomical relations which exist between the cervix uteri and the bladder and ureters render a sufficiently adequate removal of even an early growth and the tissues surrounding it in this position a matter of much difficulty. Indeed, it might be said that one of the causes of the high death-rate from cancer of the womb in women is the anatomical relations of the ureters in the intrapelvic portion of their course.

One of the most important errors prejudicing the lay view of cancer is that the disease cannot be present without the presence of a great deal of pain. When we recall the extreme anguish which many sufferers have to endure in the later stages of most of the varieties of malignant growths the mistake is not an unnatural one. In this connexion midwives and nurses can do much to instruct their patients as to the truth. They may teach them the important facts, rightly laid great stress on in the portion of the appeal addressed to nurses, that "cancer may occur at any age and in a woman who looks quite well and who may have no pain, no wasting, no foul discharge, and no profuse bleeding." The snipping out of a portion of the tissues of the cervix for microscopical examination is so simple and painless a procedure that we may hope the issue of the appeals will lead to this being carried out in all doubtful cases of enlargement or disease of the cervix uteri much more frequently than is at present the case. There is no difficulty in these days in obtaining an expert pathological opinion about such a piece of tissue, and in all cases of doubt it is certainly wisest to err upon the safe side and to have the diseased tissues widely and thoroughly removed. Hitherto the ultimate results of operations undertaken for the removal of cancerous growths of the uterus have been so uniformly disappointing that many people have lost all faith in the possibility of cure by operation. This is mainly because operative procedure usually comes too late. Patients and the public should realise the fact that the outlook in cancer in the early stages, if properly removed, is by no means so hopeless as it was, and the total number of patients cured is increasing day by day. We trust sincerely that the appeals issued by the British Medical Association may bear good fruit; and we hope that the committee which has drawn up the appeal will not consider its labours at an end, but that it will continue the work with the object of spreading a knowledge amongst women themselves of the important facts which they have promulgated. Both the medical man and the nurse are powerless unless the patient will confide in them, and in many instances the dread of cancer leads the unfortunate patient to hide her symptoms until it is too late for the medical attendant, when she does seek his help, to be of any service.

Lord Lister and the Antiseptic Method.

IN another page of this issue we have reviewed the collected works of Lord LISTER, which have been published as a memorial of his eightieth birthday. Modern surgery dates from the introduction into practice of the principles laid down by LISTER more than 40 years ago. Before that time surgery was chiefly characterised by its uncertainty. An operation might be performed with the greatest care, the design of the operation and its performance may have been of the highest type, but no one, not even the greatest surgeon of the age, could say with any approach to certainty that recovery was likely to follow. Primary hæmorrhage had ceased to be the bugbear of surgeons which it had been for centuries, for the ligature and torsion had succeeded almost completely in putting an end to the fear of hæmorrhage at the time of the operation; but only too often, some ten days or so after the operation, secondary hæmorrhage, as it was called, burst forth, and this was by far more troublesome and dangerous than primary hæmorrhage, for it might occur at any moment—in the middle of the night, as well as during the day, and the pouring out of the blood in a full stream might pass unnoticed by everyone, even by the patient himself, until so much blood had been lost that recovery was impossible. Even when the bleeding was seen it was no easy matter to restrain it, for it might come from the depths of a wound which had almost healed. Let us suppose, however, that the patient had successfully passed by the danger of secondary hæmorrhage, was the wound likely to heal without any other unfavourable manifestation? By no means: in any circumstances various septic complications were not unlikely to follow. Erysipelas was not a rare visitant to a healing wound and in nearly every case free suppuration occurred, while in hospital practice the most striking manifestations of sepsis were to be generally seen.

Pyæmia and septicæmia frequently occurred in hospitals and caused many deaths, but even more noticeable was the disease to which the conditions of its occurrence gave the name of "hospital gangrene." This was rarely met with out of hospitals, but in hospitals it was fairly frequently seen. Grey points of slough appeared on a wound and spread rapidly until the whole surface was affected, and the surrounding skin, of a dull red, was soon involved in the sloughing process.

Little was known of the causes of these severe septic complications, but theories were devised to explain the facts. The mere presence of pus was held to require no explanation; suppuration was the natural way, or one of the natural ways, in which a wound healed, and so long as the pus was discharged freely, and it was of the usual tint and odour, it was looked upon as beneficial rather than otherwise, and the name "laudable pus" which was applied to it conveyed this idea. To a certain extent there was a small foundation for this favourable view of free suppuration, for it betokened the complete formation of granulations which offer a very thorough opposition to the absorption of septic organisms or their products. Distinctly septic manifestations were at this time in part ascribed to the influence of the atmosphere or to winds from certain quarters, but it became recognised that overcrowding of wards frequently preceded the appearance of the more severe complications, and that when the percentage of open wounds in a ward was high the risk of the occurrence of pyæmia or hospital gangrene was especially great. Sometimes one or both of these diseases invaded a particular ward and remained in it in spite of all precautions, until it was found necessary to close the ward. Indeed, so prevalent were these and similar septic affections in hospitals that a special word, "hospitalism," was invented to designate, if not to explain, this unfortunate tendency to septic processes observable in hospital. One eminent surgeon was so convinced that the cause of these complications was connected with the wards that he suggested that a hospital should no longer be built of such permanent materials as brick or stone, but that it should be made of wood, so that when it had lasted some few years it could be pulled down and another wooden hospital raised in its stead, which, for a time at least, would be free from these severe septic manifestations.

The methods of dressing wounds which prevailed were calculated to spread infection. Sponges were used for bathing wounds and ulcers, and though they were washed in water after being employed for one patient they were carried straight to the patient in the next bed. Instruments also used for dressing wounds were only washed in water before being employed on the next patient, so that probes were frequent mediums to convey infection into the deeper parts of wounds. In operations, too, the conditions which prevailed must appear strange to the modern student of medicine. Hardly any cleansing of the patient's skin or the hands of the surgeon and his assistants occurred. The instruments were washed after use in one case before being employed for another, but the washing was not thorough. The ligatures employed were of silk which had been well waxed so as to make them hold more firmly, and a favourite and convenient receptacle for the ligatures during an operation was the button-hole of the coat of the house surgeon, whence they were taken as they were required. When drainage was free suppuration became fully established in three or four days, and the wound granulated from the bottom. Occasionally it happened that union by first intention occurred, but this was not encouraged, for the ligatures had been left long and had been brought out at one end of the wound, and till these separated healing tended rather to the accumulation of pus; while if it happened that no ligatures had been employed primary union of the skin was very liable to be accompanied by suppuration and the accumulation of pus in the deeper parts.

The results obtained after injury or operation naturally varied greatly with different surgeons and in different sanitary conditions, and on the whole it might be said that the results of operations in private practice were better than those obtained in most hospitals. After major amputations the mortality was very high, for it varied from 30 to 50 per cent. In some statistics of NUSSBAUM'S cases it is stated that of 17 cases of amputation 11 died from pyæmia. This was exceptionally severe, but it is certain that fatal results from septic processes were very common. It is not, however, merely from the mortality that a just comparison may be made between the pre-Listerian days and the present. Even in the cases that recovered the difference was enormous. After an operation the old-time patient suffered much pain for the first three or four days, the edges of the wound became swollen and tender, and his sleep was disturbed; this discomfort became slightly mitigated on the full establishment of suppuration. Then came the risk of secondary infections, pyæmia, septicæmia, and hospital gangrene which we have already mentioned, while erysipelas and tetanus were also frequent complications, and if the patient escaped or survived an attack of one or more of these it often required many weeks for recovery. In cases of compound fracture necrosis frequently followed, and the process of separation of the necrosed portions of bone might occupy months. It is true that in some special cases good results were obtained, for instance, KEITH'S cases of ovariotomy gave a mortality wonderfully low when we consider the date at which the operations were done, but KEITH used cleanliness in everything connected with the operation, and to this must be ascribed his excellent results. Putting aside instances such as these which were utterly exceptional, we must recognise that before LISTER made the attempt to prevent sepsis in cases of compound fracture a large proportion of cases of injury and of operation proved fatal from septic disease, and a very large proportion suffered greatly from septic processes. From all this LISTER has delivered us.

The most extraordinary ideas prevail, not only among the public but among the recent recruits to medical ranks, as to what LISTER exactly did. By some his achievement is supposed to have been the discovery of carbolic acid or its application to surgery, whereas carbolic acid, though unused then in the British Isles for surgical purposes, had been used abroad. Others imagine that his method merely consists in using carbolic acid in wounds. Those who think thus of Listerism have

not the faintest idea of the real work which LISTER did. The antiseptic method depends on a principle, viz., that for the perfect healing of a wound it should be free from germs; and this principle depended on a theory that the cause of decomposition in a wound is the presence of germs. The words septic and antiseptic were no creations of LISTER'S, as many seem to imagine, they date back at least 200 years before his time; the meaning of septic was fermentative and decomposing, and an antiseptic was any substance that could prevent fermentation or decomposition. Salt, wine, vinegar, and cold were all recognised generations ago as possessing antiseptic powers, and LISTER'S theory, based, as he freely acknowledged, on PASTEUR'S researches, was that it was not the entrance of air into a wound, but the entrance of germs with the air, that led to decomposition and other septic processes, and he pointed to the difference in the results of a simple and a compound fracture as illustrative of the nature of the origin of septic processes. His first cases treated antiseptically were compound fractures, and the problem was, how can this wound be made and kept free from germs? As some hours had usually elapsed between the infliction of the injury and its being seen by him, LISTER recognised that germs must have already contaminated the wound and he set himself to destroy all the organisms which had already gained entrance. To this end he wiped out the recesses of the wound with liquid carbolic acid and covered the opening with a piece of lint dipped in the carbolic acid, and recovery ensued without any suppuration. The event had served to prove the truth of the theory. The details of the method mattered nothing in themselves so long as they led to the same result—the destruction and exclusion of germs. The details were varied from time to time; carbolic putty was invented, then carbolic lac plaster was devised, sheet tin dressings were applied, but in each and every case the principle was the same. Gauze gradually made its appearance and the spray was instituted, but all this was done with regard to the same principle—the exclusion of germs from the wound. Further changes ensued; medicated cotton-wool and then simply sterile cotton-wool was employed as an outer dressing. The spray was discontinued, but without any change of principle. Corrosive sublimate dressings were introduced, and these were replaced by dressings of the double salt sal alembroth, and later still the double cyanide of mercury and zinc was recommended as being superior to the others. Through all these changes one unceasing purpose runs—to prevent the access of pathogenic germs to the interior of a wound, whether caused by injury or made by the surgeon in the course of an operation.

When in process of time aseptic surgery arose it was nothing more than the elaboration of the same principle. The employment of heat for sterilisation of dressings and instruments was no new thing, for in many of his earlier researches LISTER had used heat to sterilise apparatus he was employing. Aseptic surgery stands in no antithesis to antiseptic surgery: it is merely a simplification of the original form, and simplification has been proceeding from the very inception of the antiseptic method. LISTER himself early recognised that the application of liquid carbolic acid to the interior of a wound caused much unnecessary exudation which required special arrangements for its removal, and it was not very long before he replaced the liquid carbolic acid by a 5 per cent. solution. It would be a mistake to imagine that even in the aseptic method we have reached finality, though we cannot at present see the direction that any improvement can take. It is, however, certain that from LISTER'S first case in 1865 to the present time the evolutionary process has been continuous. The benefits conferred by LISTER'S invention are, moreover, not confined to the improvement of the operations practised at the time of the introduction of antiseptic surgery. Great though that change has been, that is to say from almost unlimited sepsis after operation to almost certain asepsis with rapid healing, yet in another direction the change has been greater still. The field of operation has been wonderfully widened. Regions of the body that were left untouched, and were held to be untouchable by the surgeon, are now dealt with as a matter of daily routine, and the beneficial results are commensurate with the enlargement of the scope of surgical activity—in other words, the gain to humanity is incalculable.

The reception accorded to LISTER'S work by his own profession was hardly what might have been expected. The mistake of imagining that he had merely suggested a new lotion for dressing wounds was commonly made. He had put forward a principle, and it was imagined that he had merely introduced a drug. Carbolic acid was expected to do all that the principle promised, and as in its use the principle was frequently disregarded, disappointment naturally followed. Even some of those who appreciated to an extent that the complete destruction of bacteria in the wound and their exclusion from the wound were both to be obtained, seem to have thought that the more carbolic acid that was applied the better the result would be. LISTER laid down most carefully the principle that the swabbing or washing out of the wound was only to be done once and for all, and that thenceforth the less the carbolic acid came in contact with the wound the better, but his teaching was regularly violated with the best of motives. Abroad, as at home, the acceptance of the antiseptic method was slow, but every surgeon who tried it thoroughly continued to employ it, and the effect was amazing. In VOLKMANN'S wards in 1871 the deaths from pyæmia and septicæmia were so numerous that he made up his mind to close the hospital altogether for a time, but before doing this he resolved to try the antiseptic method for a few weeks, and the results were very satisfactory. This was typical of what gradually took place everywhere, but as a rule the younger surgeons were more ready to adopt the methods of aseptic surgery, and for some years after the laying down of the right principles there were some surgeons who while they practised aseptic surgery as they understood it, did not look upon a freely suppurating wound as a failure so long as the grosser forms of sepsis were absent. Those times, however, have now passed away.

It should be of interest for us to see, without aiming to detract in the least from LISTER'S originality in the invention of antiseptic surgery, if there was anything

in the circumstances of his life which predisposed him to make the discovery. We find at once that he had a wider scientific training than most other surgeons of his time. His father, J. J. LISTER, had devoted a very large amount of attention to scientific matters, and especially to improvements in the achromatic microscope, so that LISTER had grown up in a scientific environment, and at an early age had the use of as good a microscope as was then procurable. The bent thus received led him to devote much attention while at University College, London, to the study of physiology under SHARPEY and of chemistry under GRAHAM, two men who stood at the very summit of their respective sciences. The knowledge so obtained stood him in good stead later and helped him not only in his physiological and bacteriological researches but also in arranging the practical details of his methods. It was a great advantage to him also that he had much experience of surgery both in University College Hospital, London, and in the Royal Infirmary, Edinburgh, and so observed and practised very different methods of treatment. This large opportunity enabled him to appreciate that the untoward results of operations were not the fault of any individual surgeon or of any particular surgical method but of the whole system; and when he found that as surgeon at Glasgow he was unable by all the means then in his power to stem the current of sepsis he was led to apply the bacteriological knowledge he had gained to the attempt to solve the problem of sepsis. Natural bias, early training, good masters, a wide field of observation, enormous industry and genius—these are the things which went to the discovery of the antiseptic methods.

Annotations.

"Ne quid nimis."

THE METROPOLITAN HOSPITAL SUNDAY FUND.

WE publish this week our usual Special Supplement in support of the Metropolitan Hospital Sunday Fund. The interests of this Fund have since its inception appealed particularly to THE LANCET, and we hope that the appeal from the pulpits to be made on Sunday, June 13th, will meet with a hearty response.

ILLNESS IN THE ROYAL FAMILY OF ITALY.

IN supplement to the details given in our correspondence as to the health of the Queen-Mother an Italian contributor writes: "Her Majesty still suffers from pain, neuralgic and muscular, at the cervical vertebræ; pain severe enough to make movement of the neck all but impossible. In consultation, it is understood that Dr. Baccelli inferred a tetanic indication, in abatement of which hypodermic injections of phenic acid have been practised, in addition to those of morphine. The continued suffering and the loss of sleep have reduced the Queen-Mother's strength considerably, and since May 21st a physician has sat up with her Majesty at night, relieving a colleague in attendance during the day. In professional circles it is surmised that Her Majesty has subjected her system to excessive strain by the long and rapid journeys she has been accustomed to take in her automobile. That mode of progression, indeed, is so much in favour with Her Majesty that she had contemplated a tour through Japan in the vehicle—a project which the present illness has forced her to abandon. At the Villa Margherita the inquiries as to the health of its august inmate are incessant, and the visitors' book receives many signatures daily from members of the *Corps Diplomatique* and the patrician world. As soon as the conditions permit, the Queen-Mother will be removed from Rome to a more opportune summer *villeggiatura*. As I write, I am informed that H.R.H. the Duke of Aosta is lying ill at the Palace of the Quirinal from bronchial catarrh, and that his consort, the Duchess Elena, has arrived to assist at his bedside. Fortunately, the temperature, which at first exceeded 39° C., is now nearly normal, and according to to-day's bulletin the conditions are those of 'full defervescence."

THE MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union was held at Bristol on Thursday, May 27th, when the annual report of the council and the statement of accounts were received. The annual report demonstrates once again in an unmistakeable manner the advantages which are obtainable from being a member of one of the defence societies. Not only does it convey protection from an attack by unscrupulous persons upon the member's professional character, but he can at any time seek the advice of the executive upon all matters which involve professional principle, and if he be wise he will not hesitate to seek such advice as soon as he finds himself in a difficulty or sees one approaching in the distance. A useful warning is once more contained in the report which members will do well to heed—namely, that many an action has been imperilled by unwise procedure adopted by members before seeking skilled advice; such instances are still constantly met with, but are becoming less numerous since this caution has been drawn attention to. Many members have fallen into this error by not desiring to trouble the Union in what seems to be a small matter, but it is very difficult to estimate the manifold possibilities of an apparently simple case, therefore advice should be sought before any amateur efforts are made to attempt to warn off legal complications. An important new step has been taken by the council of the Union and one which will enhance the value of membership. In the last report the matter of indemnity against adverse verdicts, where members by such are directed to pay the costs and damages, was considered. The subject has since been very carefully discussed both at executive and council meetings, and it has been decided to offer an insurance against such events. The details of the arrangements are stated in the report. Briefly stated they are as follows. Where an adverse verdict be given against a member who is thus insured, the taxed costs of plaintiffs and "damages ordered" up to the limit of £2000 or £2500, as the case may be, will be paid by the Yorkshire Insurance Company. The annual premium to be paid by insurers for the limit of £2000 in any one action will be 7*s*. 6*d*., and for the limit of £2500 will be 9*s*. Also "where a settlement is arrived at with the consent of the Yorkshire Company 'out of court' or 'in court,' after proceedings have commenced, the costs, if any, of the plaintiff, and the sum agreed to in settlement, be defrayed by the Yorkshire Company." These arrangements seem to us to be business-like and the members of the Union will be well advised to take advantage of them. The report of the solicitor (Mr. W. E. Hempson) is, as usual, of a most interesting character. Numerous cases are cited which were referred to him to deal with, and during the year 128 such cases were actually carried through, disposed of, and completed. Of these, 40 were libel and slander actions taken or defended on behalf of members; 25 were actions in which damages

were claimed for malpraxis; seven were cases relative to the prosecution of unqualified persons and the suppression of unauthorised practice; while the remaining 56 had relation to matters generally affecting the interest of the members or the profession, in which the support or intervention of the Union was sought. During the year two cases were compromised at the express request of the members involved, and in one case the Union was not successful in obtaining a verdict on behalf of the member concerned. With these exceptions, each and every matter referred to and undertaken by the Union was brought to a successful issue. The financial condition of the Union is highly satisfactory, and we offer our congratulations to the members of the council of the Union, to the solicitor, and to the general secretary (Dr. A. G. Bateman) on a valuable and satisfactory year's work.

WEATHER FORECASTING.

THE Director of the Meteorological Office has just issued an intimation that he is prepared to furnish special weather forecasts for the four months June to September, 1909. These forecasts are principally intended to further agricultural operations but as medical practitioners may frequently desire to have trustworthy information of this kind, either for personal use or for the benefit of a convalescent patient who may contemplate a journey away from home, we append some of the details from the circular. Particulars of the scheme, with forms for application, may be obtained from the Director, Meteorological Office, 63, Victoria-street, London, S.W. The official number of the circular is 052. Forecasts for the probable weather of the ensuing 24 hours, beginning at midnight on the day of issue, will be despatched, each week-day from the office by telegraph at 2.30 P.M. The forecast will be 12 words in length and the address will be additional. The cost of each forecast will therefore be 6*d.*, in addition to ½*d.* for every word of address. The office is also prepared to send notification by telegram whenever the conditions appear favourable for a continued spell of fine weather. The notification will take the form of a forecast covering a period of not less than two days following the date of issue. Those who wish this notification to be sent must deposit a fee of 2*s.* 6*d.*, which includes the cost of the telegram. Recipients who are willing to coöperate in the matter will be supplied with forms on which they can record the actual weather experienced for the purpose of comparing the forecast with the actual weather.

VACCINE THERAPY.

IN another column we publish a paper read before the Therapeutical and Pharmacological Section of the Royal Society of Medicine by Dr. W. Hale White and Dr. J. W. Eyre on the results of a year's use of vaccines in general medicine. It is considered by many observers, and we believe rightly so, that vaccine therapy will be employed in the future far more than has hitherto been the case. Satisfactory results have been reported in numerous conditions of microbic origin. The vaccines which probably have produced the most favourable consequences have been those obtained from the gonococcus and the bacillus coli communis. Dr. Hale White and Dr. Eyre record some interesting cases in which these vaccines were employed. One case was particularly striking. A man arrived from India in a very debilitated condition and was expectorating large quantities of blood and pus. Operation was not considered advisable on account of his extreme weakness and a vaccine was prepared. The result was excellent, complete recovery ensuing. With further experience it will probably be possible to extend the use of vaccines to those conditions in which, as yet, good response on the part of the patient has not followed. In croupous pneumonia, for example, numerous attempts have been made to employ vaccine therapy, but up to the present the results have been by no means all that could be desired. One of the drawbacks to this form of treatment is the time that is required to prepare a vaccine, but as the danger in pneumonia does not arise until a late period of the disease, this difficulty is not so formidable as in some other conditions. Dr. Hale White and Dr. Eyre excluded cases treated with tuberculin, giving as an explanation of this omission the length of time that must elapse before any conclusions can be arrived at. Results which have been obtained by various investigators, however, suggest a line of treatment in pulmonary and other forms of tuberculosis which is of great promise. With regard to the pulmonary form, tuberculin may be employed as an addition to the sanatorium treatment, especially in those patients who are unable to undertake but little exercise on account of constantly recurring auto-inoculations.

THE ROYAL COMMISSION ON VIVISECTION.

A LETTER signed by various members of the Research Defence Society has been sent to the Home Secretary. The letter states that—

> The Royal Commission on Experiments on Animals was appointed in 1906. It began to hear evidence in October of that year; and during 1906 and 1907 a great amount of evidence was given by many witnesses. So long ago as Dec. 18th, 1907, the Commissioners decided that they did not wish for any further evidence; but they met once more on March 25th, 1908, to hear evidence on a special point. Apart from this one meeting in 1908 it is now nearly a year and a half since the Commissioners ceased to hear evidence; but they have not yet issued their report. We are of opinion that this long delay is contrary to the public interest and is likely to prejudice the public mind. We, therefore, beg you to exercise all your influence to hasten the issue of the report.

The letter has been signed by the Earl of Cromer, President of the Research Defence Society; the Hon. Sydney Holland, chairman of committee; the Duke of Abercorn, Lord Avebury, Lady Bliss, Lord Robert Cecil, Lord Cheylesmore, Sir Savile Crossley, the Hon. Walter Guinness, Sir Edwin Ray Lankester, Sir Frank Lascelles, Mr. Frederick Macmillan, the Earl of Malmesbury, Sir Patrick Manson, the Duke of Montrose, the Dean of St. Patrick's, Lord Rothschild, Mrs. Scharlieb, Professor E. H. Starling, Sir Reginald Talbot, Sir Frederick Treves, the Duke of Wellington, and the Bishop of Winchester. We are glad to see that the Research Defence Society has taken this step.

THE ILLUMINATING ENGINEERING SOCIETY.

A SOCIETY has recently been formed under the above designation. An executive committee has been appointed and has drafted its constitution and rules. A similar society has for some time been in existence in the United States and has met with great success. The object in view is to bring into intimate relationship all those who are in any way interested in the subject of artificial illumination. For too long a period this question has been entirely in the hands of technical experts, whose purview is limited and inadequately controlled. The aim of the engineer, whatever his medium—electricity, gas, oil, and so on—has been to obtain the maximum efficiency—that is, maximum illumination at minimum cost. The distribution of the sources of light has been controlled by the architect, who is perhaps unduly swayed by convenience and artistic considerations. Both he and the engineer have paid relatively little attention to the physiological problems involved. Always important, these have become still more so with the advance of the art of illumination. The introduction of new inventions, such as the metallic filament lamp, has led to the use of light extremely rich in ultra-violet rays. It is well known that these rays are deleterious to vision, and it has become

imperative that some supervision shall be exercised over the artificial illuminants in general use. The object of the Illuminating Engineering Society is to bring together all the branches of the illuminating engineering profession, as well as architects, ophthalmologists, and physiologists, so that the problems may be fully discussed without any commercial bias and with the aim of the highest good for the greatest number only in mind. If the society maintains this lofty ideal it will deserve well of the medical profession and should receive its warm support. Further information can be obtained from Mr. L. Gaster, editor of the *Illuminating Engineer*, 32, Victoria-street, London, S.W.

A PROPOSED MEMORIAL TO THE LATE DR. J. J. RIDGE.

THE cause of total abstinence never had a stronger or more efficient champion than the late Dr. John James Ridge, of whose life we published an account in THE LANCET of June 13th, 1908 (p. 1729). No one who read that record of his character and achievements can wonder that a body of his friends have decided to perpetuate his memory in Enfield, the town of which he was medical officer of health for 27 years. We need not repeat at length the claims on which the appeal now in circulation on this behalf rests, but we will remind our readers that Dr. Ridge was a man of whom any profession might well have been proud. Before he came of age he had graduated in arts, science, and in medicine, besides gaining a university scholarship and gold medal in surgery at the University of London. Subsequently he took his M.D. degree twice over, in medicine and State medicine, and in both these branches of practice he did valuable work for the community. But the labour of his lifetime was above all devoted to the cause of total abstinence, which he was especially anxious to see rooted firmly in his own profession. He was the founder and the secretary of the British Medical Temperance Association from 1874 until he died; he formed half of the original staff of the London Temperance Hospital, of which he was a visiting physician for 25 years; he was first President of the International Union of Medical Abstainers, and for many years editor of the *Medical Temperance Review*. The first appeal for funds to provide a suitable memorial to Dr. Ridge was made at a recent public meeting at Enfield, when it was proposed, if the response should be sufficient, to erect a granite memorial in Enfield and to found a Ridge Convalescent Fund for the benefit of patients of the Enfield Cottage Hospital, of which Dr. Ridge was the founder. We believe we have only to make these proposals widely known amongst the medical profession to obtain some response from his admirers, and we are asked to state that donations may be made to the honorary treasurer, Dr. Howard Distin, Holtwhite House, Enfield.

THE RADIOGRAPHY OF CERTAIN DYSTROPHIC DISEASES OF BONE.

EVERY medical visitor to Paris knows the Musée Dupuytren with its wonderful osteological collection. The opportunity has been afforded M. Legros and M. Léri of making a systematised x-ray examination of the numerous specimens of bone disease there preserved, and their first communication on the subject is published in the latest number of the *Nouvelle Iconographie de la Salpêtrière*. It is devoted to a consideration of four morbid conditions of the bones between which there exist certain clinical resemblances; on the one hand, Paget's disease (osteitis deformans) and delayed hereditary syphilis with osseous manifestations, two diseases which in the opinion of some observers are similar, if not identical; on the other, osteomalacia and rickets, conditions producing bony deformities sometimes more or less analogous to those of the other two mentioned above, as well as presenting certain features in common. The radiographic picture of Paget's disease is characteristic and curious. In addition to condensation or rarefaction of the outer shell of compact tissue the photographs show an appearance compared by the writers to a tangled skein of the finest wool; delicate osseous threads pass to and fro in all directions, either limited to the centre of the bone or ramifying from one end to the other, sometimes reticular, sometimes anastomosing, sometimes arranged in whorls. Where the epiphyses are invaded they lose their normal contours, and in the pictures the ends of the bone look "woolly." This appearance is pathognomonic of Paget's disease. In the osseous manifestations of delayed hereditary syphilis, on the other hand, there is found a solid or almost solid mass of new-formed bone in concentric layers, while the architecture of the rest of the bone is regular and normal. The radiographic appearances of osteomalacia are also very curious. The outer layer is intact throughout most of the diaphysis, but the epiphyses are thinned and scarcely recognisable; the whole extent of the central part of the bone is transparent, and is crossed at wide intervals by dense opaque partitions, running transversely or obliquely, so that large clear irregular alveoli are formed, as much as three or five centimetres in diameter. This appearance is pathognomonic of osteomalacia. In rickets, notwithstanding the curvatures, the normal disposition of the bony layers is more or less preserved; on the concavities the compact bone is thickened, and in the centre a degree of rarefying osteitis is found, but there are no large alveoli, and no rarefaction of the epiphyses.

DISEASED ALIENS: THE UNITED STATES AND CANADA.

REFERENCE was made in THE LANCET recently to the passage of alien immigrants through Liverpool on their way to the United States and to Canada, and to the frauds practised upon them. The law of the countries mentioned is being strictly enforced in order to prevent the importation of undesirable citizens, among whom are those suffering from disease, and the suffering are easily robbed under false promises either that they shall be cured or that they shall be smuggled into the country for which they are destined. Two migrants recently made their appearance at the Guildhall police court charged under the provisions of the Poor-law, and their stories, extracted from them with difficulty by interpreters, although containing no imputation of fraud against anyone, illustrate the way in which England is used as a clearing house. The first man was apparently an Armenian from Kharput, in dominions ruled by the Sultan of Turkey. He had found his way thence about three months ago to Liverpool, where he paid £6 for a passage to New York. There the medical authorities refused to let him land and he was shipped on to Canada. He succeeded in getting ashore in Canada, but went no further than a hospital, where he was detained for a few days until he could be re-consigned to Europe. The ticket given him for this purpose seems to have been for a second-class passage to London *viâ* Rotterdam, and he made use of it as long as it would carry him, for he was found practically penniless, hungry, and quite incapable of making himself understood at Holborn Viaduct Station in company with the person charged with him. The second man seems to have met the first towards the end of his journey, for he travelled direct from New York to Rotterdam without visiting Canada. He had been shipped to America *viâ* Naples and Liverpool from Tripoli in Syria, but he too had been prevented from landing by the New York medical authorities. There was some difficulty in extracting the above

story for the benefit of Alderman Howse at the Guildhall, but the workhouse authorities had succeeded at length in finding interpreters, and the magistrate had no difficulty in certifying the men to be aliens. Their story will have been communicated to the Home Office, which will deal with them, and meanwhile they remain in prison. After all, they do not deserve very much pity, as they must be deemed to have made long experimental journeys for which they had no justification, and if they commenced them at their own expense they will finish them at considerable loss to others, and more particularly to this country. It is difficult to argue that persons of their class, whom New York and Quebec are able to reject with promptitude, ought to be accepted without question in the ports of London or Liverpool, or that England is to be congratulated upon the policy at present pursued by her in such cases. It can hardly be suggested that it is right either to encourage diseased wastrels to remain here, or to help them to spend their money on fruitless travel to countries better able to take care of themselves than we are.

"MATRIARCHY."

THE contention of many excellent people that social laws are "man-made" and therefore press unduly upon women would at least seem to require some qualification from the point of view of the evolution of the human race. Marriage, for example, can scarcely be said to have existed among very primitive communities, and its institution may be due to women. Bachofen, contrary to many serious thinkers, believes that in the earliest times promiscuity was the rule, but "after a while the women, shocked and scandalised by such a state of things, revolted against it, and established a system of marriage with female supremacy, the husband being subject to the wife, property and descent being considered to go in the female line, and women enjoying the principal share of political power." At least as many people believe the converse—viz., that marriage was the man's way of keeping possession of his chattel, but if we accept the theory of Bachofen and his school, we reach the period of matriarchy, of which many relics still exist among civilised and uncivilised races. Speaking of matriarchy, Mr. Gomme, in "Folk-lore as a Historical Science," says that among many primitive peoples kinship with the father is purposely neglected as a social factor. Among the Khasia people in the hills of Assam the husband is only an occasional visitor in his wife's house, where "he seems merely entertained to continue the family to which his wife belongs." Among the Syntengs and the people of Maoshai the husband only visits his wife in his mother-in-law's house. In Jowai he is only a visitor after dark, the fact being that, according to Major Gurdon, among these people "the man is nobody ..... if he be a husband he is looked upon merely as *u shong kha*, a begetter." Among birds and fishes occur numerous instances of what for want of a better term we may call matriarchy. Thus the late Mr. Bartlett of the Zoological Gardens informed Charles Darwin that it was certainly the male ostrich alone who sat on the eggs and took care of the young, while the female during the breeding season became extremely pugnacious. Darwin further cites a description of the female of one of the emus, who is larger than the male and altogether fiercer. "The male has a slenderer frame and is more docile, with no voice beyond a suppressed hiss when angry, or a croak." He not only sits on the eggs, but defends the young at every turn from the angry female, which is bent on destroying them. A similar state of things is said to exist among certain Indian quails, the females of which are larger than the males, and among certain nest-building fishes, the males of which do all the work, and afterwards take exclusive charge of the young. So far as mankind is concerned matriarchy is a phase occurring early in the evolution of the races, and humanity apparently has not found a matriarchal system expedient to its development as the system has not survived in any race of the slightest consequence in civilised history; but this must not be made too much of as an argument, for a scheme of things may be of no great value to a primitive folk and yet be very serviceable to more highly developed communities.

A NEGLECTED SIGN IN OBSCURE ABDOMINAL DISEASE: "THE RECTAL SHELF."

AMONG the more obscure abdominal diseases are malignant disease of the various organs and certain forms of localised peritonitis. The importance of early diagnosis in the former is obvious. In the *Albany Medical Annals* for May Dr. George Blumer has called attention to a valuable sign, which he terms "the rectal shelf." Though not new it has been strangely neglected by writers on abdominal disease. In 1895 H. Strauss, the German gastrologist, stated that in some operations for cancer of the stomach he found metastases "in the liver, retroperitoneal tissue, and in Douglas's pouch, a situation which on account of its explorability merits more frequent examination." Four years later he said that in some cases he found the early and only metastasis in Douglas's pouch, and that in two cases this was the point which decided the diagnosis between gastric ulcer and cancer. Orth in the sixth edition of his "Diagnostik" states that in tuberculosis and carcinoma of the peritoneum, especially of the disseminated form, while there may be no growths in the neighbourhood of the pelvis, there occurs as a rule between the rectum and bladder a metastasis sufficient to cause pressure due to implantation of infective material in the most dependent part of the peritoneal cavity. As a result there is often a circumscribed fibrous inflammation. From coalescence of nodules a board-like inflammation of serous and subserous tissues may result and involve the rectum, and even penetrate its wall and give rise to the diagnosis of rectal cancer. Chiari states that such metastases are moderately frequent in gastric cancer. This sign did not escape some of the older writers. Thus, in 1835, Sym of Edinburgh described a case of tuberculous peritonitis (verified by necropsy) in which the medical attendant found a tumour in the anterior wall of the rectum during life that prevented the administration of enemata.[1] Similar observations in connexion with operations for cancer of the stomach have been made by Griffon and Nattan-Larrier,[2] and by Payr.[3] Kelling states that in every case of suspected carcinoma of the stomach "I examine the patient per rectum for glands in Douglas's pouch and for rectal carcinoma." Dr. Blumer describes the condition found on rectal examination as follows. The lower part of the bowel is usually normal, and not until the prostate is passed is any abnormality usually detected. In some cases just above the prostate, in others at the limit of palpability, two to four centimetres above, the finger, passed along the anterior rectal wall, impinges on a shelf of almost cartilaginous hardness which projects into the rectal cavity. In some cases further palpation shows that the whole rectum is involved in an annular zone of infiltration more marked anteriorly and tapering off towards the posterior wall. This condition is termed by Schnitzler "signet-ring stricture." In such cases the infiltration is no longer confined to Douglas's pouch but involves the submucosa of the rectum, in which it may spread

[1] Edinburgh Medical and Surgical Journal, vol. xliv., p. 123.
[2] Bulletins et Mémoires de la Société Anatomique de Paris, 1903, vol. lxxviii., p. 491.
[3] Archiv für Klinische Chirurgie, 1905.

widely. The infiltrated area is more or less fixed and is shelf-like or peg-like. The mucous membrane over it is not ulcerated. This absence of ulceration and the peculiar shape distinguish the rectal shelf from primary cancer of the rectum. Further, blood and pus are not passed. It is possible to mistake other conditions for the rectal shelf. The lower fold of Houston is sometimes thickened, but this should not cause confusion, as there is not the board-like feeling of the rectal shelf. In one case Dr. Blumer was deceived by a small subperitoneal myoma which projected into Douglas's pouch and impinged on the rectal wall. The clinical value of the rectal shelf varies. In some cases it merely confirms the diagnosis; in others it is of great diagnostic and prognostic value. It may point to a latent growth in the abdomen. In the great majority of cases the primary growth is in the stomach; in nearly all the cases the patients are males. In females cancer cells gaining access to the peritoneum tend to become implanted in the ovary, producing metastasis there. Dr. Blumer has found the rectal shelf in five out of nine cases of cancer of the stomach. It is of bad prognostic import, for glandular metastases are almost certainly present and radical operation is contra-indicated. When the primary growth is latent the metastasis has been taken for it and has even been excised as cancer of the rectum. Symptoms of rectal obstruction may be marked.

ENGLISH URBAN MORTALITY IN 1908.

THE death-rate in England and Wales during last year did not exceed 14·7 per 1000 of the estimated population; it was considerably lower than the rate recorded in previous years since the commencement of civil registration in 1837, and was 1·4 below the mean rate in the period 1899–1907, during which steady decline in the death-rate was almost constant. The recent issue of the Registrar-General's Annual Summary for 1908, a valuable contribution to vital statistics, contains much comparable information relating to the health conditions of our principal urban populations during last year. The population of the 76 English towns, which had at the date of the last Census upwards of 50,000 inhabitants, was estimated at sixteen and a quarter millions in the middle of last year, among which population the death-rate in 1908, after correction for its age and sex constitution, was equal to 15·8 per 1000, against 16·7, 16·9, and 16·3 in the three preceding years 1905–6–7. The corrected death-rate last year in the individual towns ranged from 9·5, 10·7, and 10·9 per 1000 in Hornsey, Leyton, and King's Norton, to 20·3 in Manchester and in Rochdale, 20·5 in Liverpool, 21·5 in Middlesbrough, and 22·3 in Oldham. In the county of London, with an estimated population little short of five millions, the corrected death-rate did not exceed 14·5 per 1000, the crude rate being only 13·8. It is worthy of note that, with the exception of Hastings, all the seven towns which had a corrected death-rate last year below 12 per 1000 were suburban town districts either of London or Birmingham; and further, that of the 15 towns in which the corrected death-rate exceeded 19 per 1000, eight are situated in Lancashire. The crude or uncorrected rate of mortality within the whole registration county of Lancashire is returned in the annual summary as 16·9 per 1000, against 14·7 in England and Wales, but this rate considerably understates the real excess of mortality within this county. The rate of infant mortality in Lancashire last year was equal to 144 per 1000 births, the mean proportion in England and Wales being only 121; the rate in Lancashire was indeed only exceeded in the counties of Durham and Glamorgan, in which it was equal to 148 and 151 per 1000. There are few surer tests of the relative sanitary condition of a population than the rate of infant mortality, which shows a marked excess in most of the larger Lancashire towns. The 76 large English towns having in 1901 a population exceeding 50,000 include 15 in Lancashire; in the aggregate of these 15 towns the rate of infant mortality last year averaged 148 per 1000, while the mean rate in the 61 other large English towns did not exceed 124, and in the County of London it was but 113 per 1000. The lowest rates of infant mortality among the 15 Lancashire towns were 111 in Barrow-in-Furness, 122 in St. Helens, and 129 in Bury, while in the 12 other towns the rates ranged upwards to 151 in Manchester, 152 in Salford, 153 in Preston, 156 in Wigan, 159 in Oldham, 168 in Rochdale, and 200 in Burnley. Among the towns situated in other parts of England and Wales the rate of infant mortality did not exceed 95 in Coventry, 96 in Northampton, and 99 in Portsmouth and in Reading; whereas it was equal to 166 in Hanley, 168 in Stockport, 178 in Merthyr Tydfil, and 184 in Rhondda. These wide variations in the rate of infant mortality in the large English towns, to which the Registrar-General's returns constantly draw attention, afford the strongest proof that infant mortality is within the control of sanitary administration, and the relatively high death-rates, especially among infants, prevailing in the Lancashire towns and in some other large urban districts undoubtedly reflect unfavourable sanitary conditions, which await increased efficiency in local health administration.

PERSISTENCE OF THE CRANIO-PHARYNGEAL CANAL IN ACROMEGALY.

THE cranio-pharyngeal canal, which passes down from the floor of the sella turcica through the basisphenoid into the nasal pharynx, normally becomes obliterated in the fœtus at the beginning of the third month. In 4829 skulls it was noted by Le Double to be persisting in only ten, about 0·2 per cent. Schlaginhaufen observed it, on the other hand, in 40 per cent. of apes' skulls examined. The interesting fact now comes to light that Dr. Ettore Levi of Florence has found it persisting in the skulls of two acromegalics which he has had the opportunity of observing, and he describes the condition in the *Revue Neurologique* for May 15th. In one, situated mesially and at the junction of the anterior and middle third of the floor of the sella turcica was a round depression 6 millimetres in diameter and 6½ millimetres deep; at the bottom of this was a small round opening which communicated by a canal 9 millimetres long through the basisphenoid with the nasal pharynx, entering the latter at a point 5 millimetres from the posterior margin of the left wing of the vomer, and allowing the passage of a seeker 1 millimetre in diameter. In the second case a canal in almost exactly the same site and with the same course was found. In this connexion it is instructive that in the skull of the Irish giant Magrath, described by Professor Cunningham, an elliptical perforation was noted in the floor of the sella turcica communicating directly with the nasal pharynx, the lower end of it being partly covered by the enlarged wing of the vomer. A re-examination of acromegalic crania in view of these facts is called for, as it is quite conceivable that an abnormality of this nature has escaped observation. The light which it may throw on the hypophyseal theory of acromegaly may be considerable. Recent researches have conclusively shown the existence of pituitary tissue in the vault of the nasal pharynx, deep in the soft tissues lining the vault, an accessory pharyngeal hypophysis identical in structure with the glandular part of the cranial hypophysis and of normal and constant occurrence. Its pathology is unknown, and what relation it may bear to those cases of acromegaly without obvious lesions of the pituitary gland, and those other cases of lesion of the pituitary without

acromegalic symptoms, is equally unknown. Data such as these suggest an interesting line of research for subsequent investigators.

THE GOVERNMENTAL GRANTS FOR SCIENTIFIC RESEARCH.

WE are informed that, in connexion with the annual grant voted by Parliament in aid of scientific investigations concerning the causes and processes of disease, Mr. Burns, the President of the Local Government Board, has authorised the following special researches: 1. A continuation of the investigation into protracted and recurrent infection in enteric fever, by Dr. Theodore Thomson, medical inspector of the Board, in conjunction with Dr. J. C. G. Ledingham of the Lister Institute. 2. A continuation of the investigation into protracted and recurrent infection in diphtheria, by Dr. Theodore Thomson and Dr. C. J. Thomas. 3. A continuation of the investigation into flies as carriers of infection, by Dr. S. Monckton Copeman, medical inspector of the Board, and by Professor Nuttall of Cambridge. 4. A continuation of Dr. F. W. Andrewes's investigation on the presence of sewage bacteria in sewer air, with a view to ascertaining their number and the distance they can be carried by air currents; also a continuation of Dr. Andrewes's investigation into the part played by changes in bone marrow in the defensive mechanism of the body against infection. 5. A continuation of Dr. W. G. Savage's investigations on the bacterial measurement of milk pollution and on the presence of the Gaertner group of bacilli in prepared meat and allied foods. 6. An investigation into the chemical and physical changes undergone by milk as the result of infection by bacteria and into the relation of the pancreas to epidemic diarrhœa, by Dr. H. A. Schölberg and Mr. Wallis of University College, Cardiff. 7. An investigation of the records of charitable lying-in hospitals as to the nutrition of the mother and other factors influencing the vitality of infants and their progress in the first 14 days of life, by Mr. G. F. Darwall Smith, physician to the British Lying-in Hospital. 8. An investigation into the occurrence and importance, in relation to treatment, of mixed infections in pulmonary tuberculosis, by Dr. A. C. Inman, pathologist to the Brompton Hospital for Consumption. 9. An investigation on the relative importance of certain types of body-cells in defence against the tubercle bacillus and the effect of tuberculin and other remedial agents on their activities, by Dr. J. Miller, pathologist to the General Hospital, Birmingham.

FRACTURE OF THE SCAPHOID BONE.

FRACTURE of the scaphoid bone of the wrist has received little or no attention in the text-books and is regarded as entremely rare, but since the introduction of skiagraphy it is one of the injuries which have been revealed with unexpected frequency. No doubt before the introduction of this means of diagnosis fracture of the scaphoid bone as well as many other lesions were covered by the diagnosis of "sprain of the wrist." Probably also this fracture has been mistaken for Colles's fracture or overlooked when that fracture was also present. In the *Bulletin de la Société de l'Internat des Hôpitaux de Paris* for December, 1908, M. Judet has reported the following case. A youth, aged 20 years, was thrown violently from his bicycle against a wall. The force of the injury was received on the palms of his hands, which he put out to save himself. After the accident the lower part of the right radial region was swollen, and later the whole of the forearm. A practitioner diagnosed fracture of the radius, which he treated by massage and progressive mobilisation. Three months after the accident the patient came under the care of M. Judet because of loss of use of the wrist and pains in the wrist. All the movements of the wrist were painful and limited. From time to time, especially at night, the patient felt neuralgic pains in the area of the median nerve. The thenar and hypothenar eminences were slightly atrophied. There was an enlargement of the wrist at its external part. Palpation showed that this was due to bony enlargement which caused elevation of the region of "the anatomical snuff-box." This sign enabled the diagnosis of fracture of the scaphoid bone to be made, which was confirmed by radiography. The scaphoid was broken into two equal parts, of which the upper was displaced forwards and also had undergone a movement of rotation. The semilunar bone had almost completely lost contact with the head of the os magnum. In consequence of these changes a guarded prognosis was given. The patient was told that he would have to remain under observation for a long time, and that if the stiffness of the wrist increased or if signs of compression of the median nerve appeared resection of the carpus might be necessary. Massage, mobilisation, and baths were prescribed, and the treatment was energetically carried out. After three months there was some improvement, but recovery was far from complete. It would be of interest to record any parallel cases known to our readers.

THE PHYSIOLOGICAL STANDARDISATION OF DIGITALIS.

AN important contribution to our knowledge of the standardisation of preparations of digitalis has been made by Dr. Charles W. Edmunds and Dr. Worth Hale.[1] The introductory portion of the Bulletin contains a succinct account of the literature of the subject, from the chemical and pharmacological points of view, showing the variability of preparations of digitalis, and the impossibility of standardising them by a chemical assay of one or more of the active principles of the drug. The literature relating to the various biological methods of standardisation occupies 16 pages and forms a most valuable summary of the subject. It is shown that the various methods that have been employed fall into three primary groups, which may be classified as follows. First, a toxic method, in which frogs, guinea-pigs, or some of the higher animals are used. Secondly, a method based on the use of the frog's heart and the subsequent observation of the time that elapses before it stops in systole. The third method aims at a comparison of physiological activity by means of the relative effects upon the blood pressure in some of the higher animals. Dr. Edmunds and Dr. Hale examined a number of official and proprietary preparations of digitalis, in order partly to ascertain to what extent they varied in strength, but more particularly to find if possible a method of standardisation which was capable of yielding uniform results and possessed advantages over other methods. A superficial examination of the tables of results would seem merely to cast doubt on the value of the biological methods of assay now in vogue, but a closer examination of the tables showsed that the anomalies were exceptional, the majority of the results being uniform. It is pointed out that methods which employ as a standard the determination of the minimum lethal dose in the higher animals are not applicable to the physiological assay of preparations of digitalis, because one solution might be very weak in its action upon the heart and yet contain decomposition products the typical action of which is upon the medulla. Preference is given for simple methods based upon the action of the drug upon the circulation rather than upon the nervous system, the two best being the "12-hour toxic method" and the "one-hour method," in both of which frogs are

[1] Bulletin, No. 48, Hyg. Lab., U.S. Public Health and Marine Hospital Service, Washington, pp. 61 (1909).

employed. Full details of these methods are given in the Bulletin, which will doubtless afford assistance to the compilers of the next British Pharmacopœia.

THE TUBERCULOSIS EXHIBITION: MR. JOHN BURNS ON "THE WHITE SCOURGE."

THE Tuberculosis Exhibition, already announced in our columns, was opened at the Art Gallery, Whitechapel, on Wednesday last, organised by the National Association for the Prevention of Consumption and Other Forms of Tuberculosis. The exhibition will remain open until June 19th, during which time lectures especially directed to arouse popular attention will be delivered by well-known authorities, while a conference will take place next week on the best methods for the prevention, early detection, and the subsequent treatment of consumption. The exhibition was opened by the President of the Local Government Board in a long and eloquent address in which he suggested that for the popular title of the "White Scourge," the far more poetical description, "Captain of the Men of Death" should be substituted, and truly the terrible figures quoted by Mr. Burns justify this use of Bunyan's phrase. But while these figures showed the drain on our national vitality caused by tuberculosis the future is one of great promise, as also appeared from Mr. Burns's statistics; for in less than 40 years the death-rate from phthisis has declined by more than one-half, while the better education of the people is leading them in every direction to live their lives and shape their domestic policy towards further improvement. In particular the public is now awake to the danger that lies in unwholesome milk, and here again Mr. Burns is to the fore by introducing a Milk Bill. The text of this measure, which we shall shortly publish in our columns, makes it probable, alas, that many of the clauses will be vigorously contested, but the debates, we may be certain, will take place over details and not over principles, for the country is now roused to the perils that lie in contamination of the staple food-supply of our young and our invalids. This wholesome feeling can only be advanced by such exhibitions as that which has just been opened at Whitechapel, and we are glad to learn from Mr. George Harwood, M.P., the chairman of the exhibition, that it is intended to send the exhibition to different parts of the metropolis and the country as a form of missionary enterprise. This proceeding has been attended in Ireland, as all our readers know, with highly satisfactory results.

THE TREATMENT OF CANCER BY FERMENTS.

DURING the last three or four years much work has been done in the treatment of inoperable malignant disease in man by means of the hypodermic injection of trypsin with and without amylopsin, but, though in a few cases some improvement appeared to follow, the ultimate result was unsatisfactory and the treatment has, we believe, been completely abandoned. Dr. J. A. Shaw-Mackenzie, who has worked on this subject, publishes in this number of THE LANCET a paper describing a series of experiments on the treatment of malignant disease in mice by means of hypodermic injections of extracts of the duodenal and intestinal mucosa, and of liver extract and also of mixed ferments. Control cases were kept. The result of the experiments has been that no definite beneficial action could be ascribed to any of the injections, though at one time it looked as if the injections had some influence. The failure of these attempts does not necessarily condemn all ferments in the treatment of malignant disease, but it inculcates the lesson that it is only by using a fair number of cases that we can arrive at a definite opinion; if only one or two cases be employed, an erroneous decision may easily be formed.

IT is intended to hold a short service on Friday, June 11th (Feast of St. Barnabas), at 1.15 P.M., at the Church of St. Magnus-the-Martyr, London Bridge, being the special effort of the united parishes of St. Magnus-the-Martyr, St. Margaret, New Fish-street, and St. Michael, Crooked-lane, E.C., on behalf of the hospitals. The preacher will be the Right Rev. the Lord Bishop of Rochester. The Right Hon. the Lord Mayor, accompanied by the Sheriffs of London, will attend in state. The collection will be for the Metropolitan Hospital Fund.

A SUPPLEMENT to the thirty-seventh annual report of the Local Government Board for 1907–08, containing the report of the medical officer for the same period, has just been issued.

MOTORING NOTES.

BY C. T. W. HIRSCH, M.R.C.S. ENG., L.R.C.P. LOND.

Concerning the Budget.

AT present it seems unlikely that the rebate of half the duty on the quantity of petrol consumed in propulsion which is granted to commercial cars will be extended to automobiles used by medical men. It is, therefore, most essential to look that squarely in the face which the whole profession will regard as an unjust burden, and to take such means as we can to minimise the evil. Perhaps it may in an indirect way do us, or rather our motor cars, good. With automatic carburettors we may often be using more petrol than needful; this means too rich a mixture; a deposition of soot in the cylinders and piston-heads, with probably overheating, pre-ignition, and loss of power; all troubles that can only be treated by taking down the cylinders and caretting their insides. Now that petrol is 1*s.* 2*d.* the gallon we may perhaps be more careful, and although the pre-ignition knocks of our engine did not make us so, the Government's attack on our pockets may. If so, well, it is but another proof that "It is an ill wind turns none to good."

On top speed many engines run much better with an excess of air, and more air means less consumption of petrol and less liability to sooting. A simple way to bring about this condition is to cut two or three circular holes in the induction pipe as far away from the carburettor as possible, and, if practicable, equally distant from each inlet valve. Of course on some cars this latter cannot be done. The holes, about one-sixteenth to a quarter of an inch in diameter, should be guarded by fine gauze, and a sliding ring or sleeve should be fitted, so that on starting and on low speeds they can be closed. An ordinary tube slipped over the induction pipe and kept over the apertures by a spring answers admirably, and by means of a Bowden wire brought up to the dash-board, the tube, which should be just a close fit, can be drawn forward, and the extra air inlet so brought into use; on releasing the wire, the spring will pull the tube over the inlet and so close the openings.

We cannot produce petrol for ourselves, still, as I mentioned in THE LANCET of Jan. 9th, benzol is made in this country—in fact, in London, by the South Metropolitan Gas Company; and benzol with the carburettor air inlet widely open answers just as well as petrol. The one thing to remember when using benzol is to open the air inlet of the carburettor as much as possible and, what is even better, to make an extra one. If that is done there need be no fear of sooting and deposit in the cylinders.

A matter that will have to be settled is, Shall the tax be collected on the raw spirit as it arrives in this country or on the refined article as it is sent out in cans to the public? It looks rather as if the dealers expect to be charged on the raw material, for they have put the price up 4*d.*, the extra penny being, I presume, for duty paid on spirit that is lost in distilling. As few medical men use cars of more than 16 h.-p. the new tax, as pointed out in THE LANCET of May 8th, for annual motor-car licences, even allowing for the rebate, will

not affect practitioners much, although those living in level towns and only using cars of 6 h.-p. will save a guinea a year by the alteration. It is to be presumed that the lower power stated by the motor manufacturer will be the one on which the tax will be calculated, otherwise some formula such as the one adopted by the Royal Automobile Club, will have to be adopted. Their method estimates the horse-power from the bore, irrespective of the stroke of the engine.

A Method to Keep Motor Vehicles Free from Dust.

A simple and effective device has lately been introduced by the Kennedy Motor Company, Limited, of Glasgow, which will certainly be a boon to those who drive in open cars. It consists of two fan-shaped spouts attached to the exhaust box of the engine, which so direct the exhaust gases that they meet the dust raised by the wheels and blow it away from the car and its occupants.

Removing Deposit from Cylinders.

The only effectual method to get rid of deposit in cylinders, which becomes incandescent and so causes pre-ignition, is to take the cylinders down and curette them—that is, scrape the dome and the head of the piston. Prevention is better than cure, and provided that the mixture is not too rich, and the quality of lubricating oil used is good, and not excessive in quantity, this operation should not be needed more than once in every 18 months or two years. This scraping might not be then even needed if the combustion head or dome of the cylinder was machined perfectly smooth; in many cases these parts of the casting are left rather rough, and thus present a good surface on which deposit may settle. One of the features that calls for admiration in the sliding valve Daimler engine was the beautifully smooth inside of the head of these cylinders. But even with roughly cast insides care in the selection of the oil used will greatly assist in postponing the evil day when scraping will be necessary.

Choice of Lubricating Oils.

Because an oil is cheap it does not follow that it is not suitable; and the converse also holds true, even expensive oils are not always a success. Both hydrocarbon and compound oils have their advocates, but I believe the majority of experts recommend the latter class, believing that by their use decomposition and deposits of carbon are minimised. Anyway, oils with a flash-point not far below 500° F. are well suited, and a good test in addition to the flash is to put a little in a porcelain dish and weigh it, then place the dish with the lubricant in it in an ordinary kitchen oven for four hours and re-weigh; if the loss is under 2 per cent. and if the oil has become merely "tacky," that is, like treacle, it should do well for automobiles. Among many kinds that have a good name are the productions of Price's Patent Candle Company, Limited, Messrs. Butterworth of Liverpool, and the Anglo-American Oil Company.

THE SEVENTH INTERNATIONAL CONGRESS OF APPLIED CHEMISTRY.

CONSIDERABLE activity has characterised the proceedings of the sections of this Congress after a brilliant opening ceremony which took place at the Albert Hall on May 27th.

The Prince of WALES, in declaring the Congress open, expressed his full appreciation of the important part which chemistry plays in almost every branch of modern industry and declared that experience has warned us that the rule-of-thumb is dead and the rule of science must take its place.

Sir HENRY ROSCOE, as Honorary President of the Congress, bid a hearty welcome on behalf of all British chemists to their *confrères* assembled from all parts of the world, a welcome which Sir WILLIAM RAMSAY cordially echoed in an address in which he briefly recounted the history of the Congress since its inception at Brussels in 1894. Dealing with the practical value of chemical science, Sir William Ramsay said that our continental friends have long seen and acted on the conviction that the industrial prosperity of a country can best be advanced by a close friendship and constant association between the university and the factory, between pure and applied science. "Congresses like the present," he continued, "can teach us much and if we learn this lesson from them we shall have gained a valuable national asset."

Professor ARMAND GAUTIER followed with an expression of sympathy with the objects of the Congress on behalf of his colleagues in France. "The country," he said, "of the Lavoisiers, the Pasteurs, and the Berthelots was happy to come to offer a just tribute of homage to the country of the Cavendishs, the Davys, and the Faradays."

Similar inaugural speeches were made by Dr. HARVEY W. WILEY, on behalf of the United States; by Dr. OTTO M. WITT, on behalf of Germany; by Professor PATERNO, on behalf of Italy; and by Professor ARRHENIUS, on behalf of the remaining countries, the speakers throughout attaching great importance to the amity of nations being preserved.

As so often marks the organisation of international congresses, there proved to be a real plethora of papers and addresses, and many sections found it impossible to get through their programme in the time allotted them. Equally impossible is it to give anything like adequate treatment to the various subjects discussed, although so many of them had important relations to medical science and administration. The question of food supply was, for example, discussed in many directions. Professor Bernthsen's remarkable summing up of the question of the world's supply of nitrogen attracted considerable attention. The production of nitric acid from the air on a tiny scale by Cavendish in 1781 had since received a mighty development, for at the present day hundreds of tons of nitrate available for the fertilisation of the soil were being manufactured with the agency of water and electric power, and it was probable that in a few years the annual output of air saltpetre would reach 100,000 tons. Such a consummation would appear to eliminate the view entirely that we are any longer at the mercy of natural processes for the production of fertilising materials.

Professor WITT of the famous Charlottenburg laboratories, in his able lecture on "Evolution in Applied Chemistry," referred to the same subject and instanced the case of Norway, which had begun to develop a chemical industry of vast dimensions. Its factories would have no chimneys and no fires. They would be actuated by the white coal, the force of roaring torrents. If we considered how our present chemical industries had been evolved from empirical processes such as our ancestors practised and as they still exist in the countries of the East, we could easily observe a gradual transformation similar in respect to the one that living nature had to go through in evolving the present types of plant and animal life. He thought it an important duty to watch over the intellectual wealth of the past and to collect it before it disappeared for ever.

In the bromatology section many interesting papers on food questions were discussed, and amongst them references were made to the vexed question of standards. Mr. F. W. BECK, who has given considerable attention to the legal aspect of the matter, thought that a general fixing of standards for natural products or articles of simple manufacture was of very doubtful utility, and that a standard was futile in the case of mixtures such as coffee and chicory and prepared cocoa. He expressed the opinion, however, that some better legislative control was needed in regard to the use of colouring matters and preservatives.

The position of English legislation and administration in regard to food was admirably summed up by Dr. G. S. BUCHANAN of the Local Government Board.

Mr. E. RUSSELL and Mr. F. W. F. ARNAUD suggested new standards for fat in milk based on the average monthly percentages obtained in the case of two large towns submitting more than 500 samples of milk for analysis annually. The authors suggest seasonal standards, as, for example, a 3 per cent. standard for four minimal months, raising this to 3·3 per cent. for other periods of the year. On a low figure for fat, such as 2·85 per cent., for the minimal period, this would be raised to 3·5 per cent. during the maximal period, the standard being 3·3 per cent. for the intermediate months. It is contended that these standards would at least render the task of the skilled adulterator more difficult in preparing "legal" from pure milk, as by the addition of the requisite quantity of separated milk or by skimming. In the same section it was agreed to define brandy as "a product of distillation of the fermented juice of the grape" without regard to the kind of still in which it was obtained. Other articles of food were also considered and standards suggested. The consensus of opinion was in favour of the formation of a board of reference to deal with these questions.

Dr. W. H. WILEY in his paper on Food Control in the

United States pointed out that the Food and Drugs Act in that country was administered by the Secretary of Agriculture who, under the authority of Congress, established standards of purity. He said that the system worked well, the consumer being protected and the supplier unhampered.

There were several interesting topics discussed in the hygiene section, Sir JAMES CRICHTON-BROWNE taking Sewage Disposal and Disinfection as the theme of his presidential address. He pointed out that nature was constantly engaged in disinfecting the globe; the ocean was a pickle-tub, the air an indefatigable fumigator, and the sun a revolving incinerator. He pointed out also the importance of placing the supply of disinfectants under control in order to secure the sale of disinfectants of guaranteed germicidal efficiency.

Mr. A. WYNTER BLYTH, in a paper on the subject of Disinfectants, argued that the bacteriological test for disinfectants cannot be used alone for standardisation purposes owing to the want of agreement in the results obtained by different bacteriologists using the same standard method. He contended that chemical analysis should be combined with bacteriological tests.

In the same section there were some interesting papers, which we hope to refer to in a future issue, on such questions as the pollution of sea water by sewage, the better utilisation of sewage sludge, and the purification of streams. Space also for the present precludes us dealing with the many excellent papers on pharmacological subjects discussed in the pharmaceutical chemistry section. There were also a number of papers read on synthesis, analysis, helium, smoke, dust, and so forth, a further reference to some of which we hope to have the opportunity of making in the future. We agree with the *Times* that if congresses had as much respect for time as newspapers are compelled to have for space they would reform their programmes in the direction of brevity.

The proceedings were formally closed on Wednesday, when it was announced that a direct invitation had been received from the United States Government to hold the next meeting, which will be in 1912, in that country. The invitation was cordially accepted.

THE SECOND INTERNATIONAL CONGRESS ON THE CASUALTIES INCIDENT TO LABOUR AND INDUSTRY.

AFTER a brilliant inauguration on Monday, May 24th, in the Hall of the Horatii and Curiatii in the Roman Capitol, at which the spokesmen were the Syndic, Signor Nathan, the Minister of Public Instruction, Signor Rava, Dr. Guido Baccelli, and the President of the Organising Committee, Professor Salvatore Ottolenghi, the Congress, to the number of nearly 500 delegates, Italian and foreign, proceeded to the Policlinico, the great hospital outside the Porta Pia, and occupied the afternoon sitting with special business. The first paper was that of Signor P. Colajanni—an elaborate report on the "Organisation of the Medico-Chirurgical Service for the Cure and Surveillance of the Lesions incurred by the Labourer and the Artisan," in the course of which he dealt with the casualties incident to those employed in the Sicilian sulphur mines and gave a luminous account of the services, medical and surgical, organised in behalf of the sufferers, dwelling particularly on the working of the "Obligatory Syndicate of Mutual Assurance." Signor Colajanni's positions were well maintained in the ensuing discussion, which was followed by papers from German, Dutch, and French delegates, all contributing illustrations and suggestions gathered from special experience in cognate fields.

On the morning of Tuesday (May 25th) the Congress resumed business under the presidency of Dr. Thiem, representing Germany; Dr. Poëls, representing Belgium; and Professor Ottolenghi, Professor Tamburini, and the Commendatore Magaldi representing Italy. The main topic of discussion was the report on the "Organisation of the Medico-Legal Service in cases of Casualty and on the Guiding Principles to be followed by the Expert in Diagnosis." Dr. Becker, speaking from German experience, discussed the features of "simulation" in the casualties incident to labour and industry—"simulation" not the result of attempted malfeasance or deception. Dr. Miller (the reporter) contended that the rules laid down for expert guidance in the law of June 30th, 1900, were only sufficient for the more necessary requirements in protecting the "diritto d'assicurazione" (right of insurance companies), and did not suffice for "questioni giudiziarie" (questions before the law courts). Descending to points of detail, the Congress heard with interest the remarks of Dr. Giuseppe Gradenigo, professor of oto-rhino-laryngology in the University of Turin, who deplored the incompetence of non-expert dealings with injuries of the throat, ear, and nose, illustrating his position with concrete examples, a position reinforced by Dr. Poëls, who also maintained the necessity for more specialised knowledge and experience on the part of practitioners called in on occasion of indemnity for lesions incurred in the industries. Third in order on the agenda paper came the topic headed "Ascertainment and Prognosis of Neuroses in Casualties Incident to the Labourer and the Artisan." On this the chief spokesman was Dr. Cesare Biondi, professor of legal medicine in the University of Cagliari (Sardinia), who dwelt on the early or precocious symptoms of the neuroses in question, and was followed by Dr. Poëls and Dr. Tamburini, professor of psychiatry, theoretical and clinical, in the University of Rome, the latter of whom contributed much interesting illustration of the "traumatic neuroses." Dr. Biondi, after a rather searching crossfire of questions from other delegates, French, German, but mostly Italian, maintained his positions in a highly effective speech, and sat down amid applause.

The business of Wednesday, May 26th, turned primarily on the "Estimate of the Capacity for Work before and after Lesion," the first delegate to intervene in the discussion being Professor Carrara of Turin, who contended that in many ailments attributed to casualties in the factory or the field it was impossible to diagnose, in a manner medically sound, the nature and extent of the particular lesion. Professor Imbert of the University of Montpellier spoke on the legal difficulties in assigning compensation for injury, and was followed by Dr. Poëls, who animadverted on the want of method and system inherent in existing legislation for making the "estimate" in question. Dr. Treves of Milan added other considerations in a cognate sense, and pointed out that in estimating the victim's capacity for work before or after injury the expert should take into account the "ambiente" (surroundings, material and moral) of the industry or labour in which the said victim was engaged. At this point Dr. Mennella (medical major in the army) gave instances of how the lesion, when traumatic, perverts the functions of the nervous system and affects, pathologically, those of the viscera by vaso-motor disturbance—the digestive and genito-urinary apparatus being so involved as to cause "auto-intoxications" which aggravate and prolong the post-traumatic effects and give rise to many symptoms, neurotic and psychical. Dr. Liniger, who holds the chair of Social Medicine at Düsseldorf, urged the necessity, in estimating capacity for work after injury, of supplementing the examination of the practitioner called in by that of another with a view to "check," so as to arrive at a less disputable judgment, and, following up his contention, he drew a strong distinction between the direct and the indirect consequences of injuries sustained. From this stage the discussion expanded over a wide area, Dr. Le Noir of Paris incurring the adverse criticism of Dr. Reclus, who argued that the injured operative should be indemnified in proportion to impaired capacity for work without consideration of the possible effects of pre-existing ailments in modifying the nature and consequences of his injury.

After many opinions, *pro et contra*, had been heard, the Congress left the subject unsettled and passed to the next topic dealing with the "Influence of the Forms of Indemnification on the Estimate of Post-traumatic Nervous Disorders," which again proved fertile in controversy. Dr. Oettinger said that "the nervous phenomena observed after traumatic lesion have become even more frequent since the passing of new laws on the casualties in field and factory"—in abatement of which fact he recommended that the "juridical position" of the injured operative should be fixed with least possible delay and that a "small fund of indemnity" should be instituted *ad hoc*. Dr. Lombroso of Florence urged the importance of losing no time in paying the indemnity as soon as the "malattia nervosa post-traumatica" had been ascertained. Again the discussion diverged into

subtleties more or less technical until the Congress passed, not without a sense of relief, to the next topic, "The Functional Adaptation of Limbs affected by Lesion" (Arti Traumatizzati). This proved a most interesting theme, in the discussion of which the successes of the mechanician working in concert with the surgeon were conspicuously in evidence. Finally, at its closing sitting, on May 27th, the Congress dealt with the "Statistics, in their Medical Aspects, referring to the Application of the Laws on the Casualties of Industry and Labour." For the interesting and animated exchange of views which this theme evoked reference must be made to the official "Resoconto" shortly to be published, as well as for the subsidiary communications submitted in supplement to the seven main topics dealt with on the agenda paper.

Thus closed a highly successful Congress on one of the most important subjects of the day, involving issues of the deepest interest to Labour, Industry, Capital, and Science, whether social, medical, or surgical. An eloquent valedictory discourse from Dr. Ottolenghi was followed by a motion on the part of Dr. Liniger proposing Düsseldorf as the seat of the next Congress. This was carried by acclamation and the delegates thereafter proceeded "from labour to refreshment" in the form of a sumptuous banquet in the Hôtel Excelsior.

HEALTH OF THE CITY OF LONDON.

WE are indebted to Dr. William Collingridge for a copy of his recently published report as medical officer of health of the City of London. In this report, which is the ninth by the present writer, the sanitary condition of the City in recent years is compared with that obtaining in the middle of last century—very much, we doubt not, to the gratification of the City Corporation. In connexion with the vital statistics of the City, the first matter to claim attention is the unique character of its population. Dr. Collingridge reports that some persons who desire to belittle the importance of the City frequently allude to it as of only one square mile in area, with a decreasing and insignificant population. To this calumny the report supplies the sufficient refutation that whilst the number of persons passing the night within the City is probably less than 20,000, the number congregated on that area during the daytime is estimated to exceed 385,000. Of the magnitude of the assemblage of human beings that daily takes place in the City some idea may be gathered from a further statement in the report that the number of persons known to have entered and left the City on one day alone in May, 1891, was not less than 1,186,000. Having regard to the foregoing facts, and especially to the consideration that the Corporation are responsible for the hygienic welfare of an unknown number of persons during their daily sojourn in the City, the medical officer of health very properly urges upon his sanitary authority the necessity of ascertaining, by actual enumeration, the number of persons resident in the City during the working hours of the day. Dr. Collingridge tells us that the taking of the first day census of London was decided upon by the City Corporation in the year 1866, a special committee of which reported, at the time, as follows:—

> The Imperial Census taken decennially under the authority of Parliament affords no indication whatever of the actual population of the City, and every recurring census only leads further astray in this respect. That census is gathered, for the sake of convenience, while the population is sleeping, and affords in almost every other district a fair indication of the actual number of the inhabitants; but, owing to the peculiar and exceptional nature of the City population and the circumstances of those who there carry on their business, it so happens that the census taken by the Imperial Government omits from enumeration in the City the very class of persons whose trade, wealth, and enterprise make the City what in fact it is—the greatest, most crowded, and wealthiest commercial emporium to be found in the world.

In view of the near approach of the next Imperial Census year, and having regard to the desirability that no time should be lost in making the necessary preliminary arrangements, the medical officer of health recommends that provision should be made for the day enumeration above referred to at or near the date of the next Imperial Census taking—i.e., in 1911.

Very remarkable is the improvement that has taken place in the health and sanitary environment of the citizens of London within the last 60 years. In order to appreciate the growth of reform it will suffice to compare with the state of things now happily existing the deplorable conditions of life in the metropolis in the days of Sir John Simon, the first medical officer of health. Reporting in 1849, Sir John Simon stated that "as far as could be ascertained there were within the City some thousands of houses with cesspools attached to them, and that the supply of drinking water was only a fraction of what it should be. Thousands of the people had no supply of water to the houses in which they dwelt. For possession of the first necessity of social life such persons wholly depended on their power of attending, pail in hand, beside the nearest stand-cock, where, with their neighbours, they waited their turn during the tedious dribbling of a single small pipe." Again, in referring to the conditions then prevailing in tenement houses he wrote: "It is no uncommon thing, in a room 12 feet square or less, to find three or four families *styed* together (perhaps with infectious disease among them) filling the same place day and night—men, women, and children in the promiscuous intimacy of cattle. Of these inmates it is nearly superfluous to observe that in all offices of nature they are gregarious and public; that every instinct of personal or sexual decency is stifled; that every nakedness of life is uncovered there. Who can wonder at what becomes, physically or morally, of infants begotten and born in these bestial crowds!" A cursory perusal of the present report will suffice to show how vast is the improvement that has been effected in all that concerns the health and sanitary wellbeing of the citizens of London since Sir John Simon penned his burning words.

The enormous expense incurred in the formation of new thoroughfares, in the widening of streets, in the demolition of unhealthy areas, and in the provision of dwellings for the working classes has been willingly met by the ratepayers. In no other town at the present day is the work of public cleansing more thoroughly attended to, and nowhere is sanitary accommodation for visitors better provided for. Without a pure and plentiful water-supply no community can be held to be living under satisfactory conditions of health or even of cleanliness. Dr. Collingridge reports that the citizens have no reason to complain of the quality of the water supplied to the metropolis, but that they do complain bitterly of its cost. In consequence of what is considered unfair taxation in this regard, a considerable number of artesian wells have been already sunk in the City, and many more are now in process of construction. In every instance in which the water from these wells has been examined the public analyst has testified to its excellent quality.

The character of the food-supplies of the City received special attention during the year under report. We are not surprised to hear that the due supervision of the quality of the meat and other food which in enormous quantity passes through the City markets entails heavy responsibility on the sanitary staff, and this responsibility has been further augmented by the issue of new regulations by the Local Government Board.

The milk-supply of the City has been kept under constant supervision, and the milk arriving in London for delivery to dealers in the City has been subjected to bacteriological and chemical investigation by the officers of the health department. Very full, if somewhat startling, particulars are given in the report concerning the analysis of milk samples in each of the last four years, the results of examination being tabulated under the following heads: (1) fairly clean and pure; (2) unclean; and (3) tuberculous. Notwithstanding the publicity given in recent years to the details of analysis of milk by the public analyst, the present report shows that even in the year 1907 not less than 37 per cent. of the samples analysed were returned as "unclean," whilst 8·3 per cent. were returned as "tuberculous." The proportion of tubercle-contaminated milk in the City supply appears to have been practically constant in recent years, and it is important to note that in every case in which milk has been condemned as tuberculous the bacteriological result has been confirmed on examination of the herd of cows producing it. There is little reason to look further afield for the causes of human tuberculosis, unless the degree of contamination in the milk-supply of London is enormously greater than that of the country generally. The value of bacteriology as a means for determining the presence or absence of disease in milk is abundantly shown in the present report, and it is not a little surprising to learn that practically no precautions are even yet taken by either farmers or wholesale dealers to ensure that the milk shall not be a vehicle for the conveyance of tuberculosis.

Dr. Collingridge is clearly of opinion that the control of milk-supplies is a matter for the supreme authority of the Board of Agriculture and Fisheries, whose business it should be to see that the Dairies, Cowsheds, and Milk-shops Orders are effectively carried out by those responsible for their administration. While the best method of controlling the milk-supply is undoubtedly at its source—viz., the farm, there is no real difficulty in effecting this on the spot by the local authority, for upon bringing the facts to the notice of the local medical officers of health steps have promptly been taken in every case to improve the local sanitary conditions of the farm concerned. This indicates that there is no necessity for a central authority to waste time and money in inspecting country farms where their intrusion would be resented, all that is necessary being for each urban authority to maintain strict supervision over the purity of the milk supplied to the district, and where this is unsatisfactory to communicate at once with the local authority and also with the Board of Agriculture and Fisheries. Dr. Collingridge questions the wisdom of the London County Council in its present attempt to acquire powers for examining milk at the metropolitan railway stations with a view of preventing the distribution of dirty milk. Obviously it would be better to eliminate the risk of danger at the farm than to seek to control it after delivery in London. He expresses his conviction that piecemeal legislation of this kind can never be effective, and that the only satisfactory way of dealing with this question is for the Government to proceed at once with the long-promised general measure dealing comprehensively with the subject. In this connexion it is satisfactory to note that last week Mr. John Burns introduced into the House of Commons his promised measure entitled "The Milk and Dairies Bill," which seems likely to be effective provided that it eventually obtains a place in the Statute Book; some of the provisions, however, will provoke opposition. And however thorough may be the supervision of the milk farm, there are other factors prejudicially affecting the wholesomeness of the milk during its transit to London. For example, the churn in common use is sadly ill adapted for its purpose, as it affords a resting-place for filth which readily obtains access to the milk through the ventilating apertures in the lids. Moreover, the churns are often returned to the farmers unscalded and even unlocked, so that there is no guarantee that even ordinary cleanliness has been observed. Again, the practically universal system of mixing at the metropolitan railway stations necessarily leads to exposure of the milk to contamination by the dust constantly present in the atmosphere of a great city. At the stations the milk is treated with a "rouser," which has often been allowed to stand on the dirty platforms; and the mixing is conducted by the operator, who plunges his naked arm into the churn, transferring some of the milk to another vessel. In these several ways the milk runs the risk of serious pollution before delivery to the consumer, who, seldom adopts the precaution of boiling it before use as food.

Of the investigations undertaken during the year for the detection of obscure disease, and of the administrative measures adopted for the protection of the public health, the report contains full and very instructive particulars. Among these the most far-reaching and important is the investigation which was undertaken with the aid of Dr. Klein, and which establishes the value of bacteriology as a means of elucidating difficult sanitary problems. Dr. Collingridge gives account of an outbreak of illness occurring in a large business establishment in the City in which a large number of persons became seriously ill, apparently as a result of ingesting a quantity of "vermin destroyer" which had in some way got mixed with their food. In every case the illness is described as having been very severe, although happily not fatal, the patients having recovered by the end of a week from attack. What is particularly important from a public health point of view is the fact that examination of the excreta of the patients showed the presence of the same bacterium which is contained in the vermin destroyer and which is stated to be fatal to rats, mice, and other rodents, but to be harmless to domestic animals and to human beings! In view of this investigation the truth of the latter clause of the statement would appear to be more than doubtful. Indeed, a representation has already been made to the Government, as a result of which it is hoped that some restriction will be placed on the indiscriminate sale of vermin poisons of this nature.

The usual tables of vital statistics are included in this report, and Dr. Collingridge is able to report a death-rate for 1908 of only 12·6 per 1000 of the population; this rate is almost identical with the rate of the preceding year, whilst that of the entire County of London was 13·8.

The useful standard tables issued by the Local Government Board are appended, and especial prominence is given to the infantile mortality table, which shows the loss of life from the principal causes at the several stages of the first year of age. Measured in terms of total births the deaths of infants under the age of one year were only 65 per 1000, as against 113 per 1000 for the whole of London.

SANITATION IN INDIA.

VI.[1]—JAILS (*continued*).

Burma.

THE report for the year 1907 on the Prison Administration of Burma is furnished by Lieutenant-Colonel G. J. H. Bell, I.M.S. The number of jails in this province are six central and 24 district jails. At the beginning of the year the total number of prisoners of all classes in confinement was 14,129, an increase of 901 over the corresponding numbers for 1906. During the year, however, there was an actual decrease of 1201 in the number of prisoners admitted, the numbers being respectively (for 1906 and 1907) 35,674 and 34,473.

We are glad to note that a wise reform in the jail administration has now been perfected—namely, the segregation of juvenile criminals from the rest of the jail population, whilst arrangements are also being made to provide separate accommodation for juvenile first offenders and juvenile habituals. The jail at Meiktila has been set apart for this purpose. Certain structural alterations require to be made in this jail, the details of which are being worked out by the Public Works Department; the jail when altered will provide separate accommodation for 100 juvenile first offenders and 50 juvenile habituals, thus supplying a long-felt want; for these new arrangements should add very largely to the reformatory and educational character of sentences of imprisonment passed on juvenile offenders. With regard to the number of these prisoners in the year under review they fell from 171 in 1906 to 89 in 1907. Another fact that should be noted is the general decrease of 54 in the number of offences of assaults and mutiny. This, though not so large as in the preceding year, is still very satisfactory. Rangoon, however, showed a very marked increase in this class of offence—viz., from 50 in 1906 to 178 in 1907. The superintendent of the jails reports that the assaults were not due to any combination amongst the prisoners, but that each case was an attempt apparently to take revenge for a private grudge or was due to sudden outbreaks of temper.

Coming now to the vital facts relative to the jails in Burma it is evident that wise forethought has been exercised in this direction. With regard to the water-supply samples were sent to the chemical examiner for analysis, and when the report thereon was unfavourable steps were taken to remedy the defects. In several jails the drinking water is boiled. Water drums fitted with taps and locks are being supplied, only two jails remaining without them. Other means of ensuring a good water-supply were the improvement of existing filtering arrangements. Thus at Thayetmyo a masonry cistern for cooling the filtered and boiled water was provided and brought into use in August, and as one cistern was found to be inadequate the provision of another was approved of. At Myingyan the excessive amount of total solids in the drinking water has been suspected of being the cause of cases of muco-colitis. Over-concentration by prolonged boiling probably had the result of increasing this defect, and care is now taken that the water is boiled only for 10 minutes. At the Rangoon jails the chief source of the water-supply therein was pronounced by the chemical examiner to be unfit for drinking purposes

[1] Nos. I., II., III., IV., and V. were published in THE LANCET of April 10th (p. 1067) and 24th (p. 1199), and May 1st (p. 1269), 15th (p. 1412), and 22nd (p. 1480), respectively.

owing to the presence of organisms of the coli group, and its use was discontinued for the greater part of the year. The water has, however, been now declared to be fit for drinking. It may be mentioned also that the Inspector-General acknowledges a plan furnished to him by Colonel King, I.M.S., the Sanitary Commissioner, for an overhead shower-bath for use in jails. Lieutenant-Colonel Bell has introduced this system for trial into one of the sections of the new jail at Moulmein, and should it be found satisfactory and not too expensive its use should be extended to the other jails. Regarding the employment of the prisoners, some difficulty in obtaining a sufficient amount of hard labour was experienced in certain of the jails. Wheat-grinding provides a most suitable form of labour for a large number of prisoners. Stone-breaking in the Rangoon jail has had to be discontinued on account of the removal of the municipal stone depôt to a site to which the prisoners could not be sent, the expense involved in carting the stone to and from the jail being too prohibitive. Lieutenant-Colonel Bell regrets that this excellent and remunerative form of hard labour, which had for many years employed a large number of prisoners, has been unavoidably lost to the jail department.

With respect to the lines on which the conservancy arrangements are being carried out, the Inspector-General finds that the latter are efficiently performed. He also has wisely, we think, not discontinued the system of mounding excreta previous to their use as manure in certain of the jail gardens. This system has had the approval of his predecessors in office for many years, and with proper precautions has always been found successful.

Coming now to the sickness and mortality experienced in 1907 in the jails of Burma, we find that though the daily average number of prisoners in confinement rose from 13,370 to 13,721, the number admitted to hospital decreased from 3736 to 3506, the daily average sick from 211 to 190, and the deaths from 198 to 163. The ratio per 1000 of average strength as regards admissions to hospital fell from 297·43 to 255·52, of daily average sick from 15·78 to 13·85, and of deaths from all causes from 14·81 to 11·88, as compared with 1906, showing that the standard of health in 1906 has been more than maintained during the year under review, the ratios of admission, daily sick, and deaths to daily population during 1907 being the lowest recorded since 1892. There has been a remarkable change for the better in the case of some of the jails Thus Thayetmyo, which for two years showed the highest death-rate, in the year under review occupies the lowest place, the ratio being now 3·65, as compared with 28·99 in 1906, although the daily average population increased from 759 to 821. Moreover, in none of the causes of death reported could any influence of jail life have been the cause, the causes being leprosy, volvulus, and erysipelas. The superintendent of the jail, Major F. A. L. Hammond, I.M.S., generously attributes a large part of this improvement to the exceptionally good work throughout the year of his hospital assistant, Brij Lall. Lieutenant-Colonel Bell, we are glad to note, strikes the right nail on the head when he states that the careful management of the sanitary and medical work of the jail by Major Hammond must have largely contributed to the satisfactory result that has been gained. In another of the jails—viz., Myingyan—showing these excellent medical results, the superintendent does not take any credit to himself; but it is evident that such good results could not have been obtained without great care and attention both by the superintendent, Lieutenant-Colonel Stewart, and his hospital assistant. Lieutenant-Colonel Bell likewise praises Dr. Hollingsworth, the superintendent of the jail at Myaugomya, for his creditable management of the jail.

As regards the chief causes of sickness and mortality in 1907, there were four cases of cholera, three proving fatal. All were imported cases, and one in particular showed the value of the segregation of new admissions. The prisoner in question was received on transfer from another jail, placed on arrival in the segregation shed outside the jail, and whilst there developed symptoms of cholera and died within 24 hours. He was stated to have received some food from a hawker at the Pegu railway station, cholera being then prevalent at that station. Dysentery gave a slight increase in the number of admissions—viz., from 223 to 256—but the number of deaths was only seven as compared with 18 in 1906. With regard to the causes of the disease, in one jail, as before remarked, the cases were most likely not dysentery, but muco-colitis, possibly due to the already large proportion of solids in the drinking water having been increased by concentration through over-boiling; although the Inspector-General thinks it probable that some cause other than the quality of the drinking water may be found for the occurrence of these cases. In those jails where there has been a reduction in the number of cases this has evidently been due to the superintendents being fully alive to the necessity for strict precautions being followed with regard to segregation of dysentery patients, the protection of drinking water from contamination, the use of separate clothing, beddings, and utensils, and the disinfection and destruction of all excreta and refuse food. Malaria showed a noteworthy reduction in the number of cases; thus in 1905 there were 632 admissions; in 1906, 635 admissions; but in 1907 only 489, or a ratio of admissions per 1000 of average strength of 52·88, 50·37, and 37·59, and of deaths of 0·59, 0·48, and 0·23. With reference to this striking decrease, it is to be noted that there were no extraordinary meteorological phenomena in 1907; the rainfall was fairly well distributed and of a good quantity. In 1906 the rains had been light, and the superintendent of one jail, Akyab, held that this had had something to do with the increase. The prophylactic use of quinine certainly was of value in reducing the number of cases, and is fully recognised. The method in use is that every prisoner who is believed to have suffered from malaria is given 10 grains of quinine twice weekly, and the treatment is continued until it appears that the prisoner is free from malaria. A register of the cases is carefully kept. As regards the diagnosis of the cases returned as malaria, blood examinations were systematically made in all cases of fever, and in by far the large majority of cases returned as ague the presence of the malarial parasite was demonstrated, whilst in the few cases in which it was not the symptoms were so typical as to leave no doubt of the disease. Captain H. H. G. Knapp, I.M.S., the jail superintendent, Rangoon, has evidently followed the example of Colonel W. J. Buchanan, I.M.S., who some years ago trained certain of the convicts to diagnose the organism microscopically. The increase of the number of cases in this jail, where malaria is only returned as such when the organism has been found, is evidently partly due to the greater degree of skill possessed by the convict who conducts the microscopical examination. Tuberculous diseases showed a fall in the number of admissions and deaths, being 68 and 43 respectively, as compared with 114 and 54 in the previous year. Great attention is paid to prophylaxis in these cases, and in this respect the Inspector-General draws attention to the necessity of seeing that each patient's blanket is kept exclusively for his own use, and also for the careful washing and disinfection of all blankets when in use and when received back into store. The work of disinfection is rendered easy by the use of Thresh's disinfectors, one of which has been supplied to each jail. Proposals for the construction of a separate jail or ward as an annexe to one of the existing jails in the dry zone, for the accommodation of 50 prisoners suffering from tuberculosis, but to be made capable of further extension, have been submitted to Government, but are still under consideration. It is much to be desired that the necessary sanction be granted. With respect to the cases returned as "simple continued fever," the Inspector-General states his opinion that not a few of these are due to tuberculosis. There can be little doubt, we think, but that he is right. In many parts of India cases occur in which for some days, or even weeks, no thoracic signs are found, and which suddenly light up into acute tuberculous affections of the lungs. This has been especially noted to occur in the case of Goorkhas. Plague, notwithstanding its prevalence in many districts, gave only two cases in the Burma jails during the year; one of these (a bubonic case) was at once recognised on his arrival at the jail gate by the hospital assistant. During the year steps were taken to render the grain godowns in or attached to jails rat-proof, and at the close of the year the work in 19 jails had been completed and estimates had either been sanctioned or were in preparation for the remaining jails. The Inspector-General tenders well-deserved praise to the superintendent, subordinate medical staff, and jailers for the success attained in keeping the jails free from the disease during the year. The report concludes with the usual appendices.

EGYPT IN 1908.

Sir Eldon Gorst's second annual report on the progress made in the various departments of the Egyptian Government is, like its precursor, drawn up for the year 1908 in accordance with the model established by Lord Cromer, and, unlike most official documents, is consequently as easy to read as it is full of information; but although the sum total of the latter is, generally speaking, satisfactory, it is disappointing to learn that the working of the existing institutions by which the people are already associated with the functions of government is by no means all that could be desired, and that the Legislative Council and General Assembly are losing ground, the part played by these bodies in the administrative system of the country being less efficiently performed than heretofore. The first subject dealt with by Sir Eldon Gorst with which we are more particularly concerned is the census of 1907. The number of persons enumerated in the ordinary way was 11,189,978, including 147,334 foreigners. The Bedouins, who live scattered over vast and more or less desert tracts, and are not collected in any considerable number at definite points, were not enumerated, but estimates of their strength, amounting in the aggregate to 97,381, were furnished by their Omdehs, or head men, the total population of the country being thus brought up to 11,287,359 individuals divided into 5,667,074 males and 5,620,285 females. In 1897, when the previous census was taken, the number of inhabitants, according to a corrected statement, was 9,717,228 persons of both sexes (including eunuchs); the increment during the ten years was consequently upwards of a million and a half, which gives an annual augmentation of 1·6 per cent.[1] The inhabited areas of Egypt being equal to about 12,000 square miles the density of the population, omitting the sparsely peopled desert regions, was 939 per square mile. This largely out-distances all the European countries, the nearest approach to it being the 588·7 per square mile of Belgium, and, as Sir Eldon Gorst observes, "It seems probable that nowhere outside Bengal will an area of like size be found carrying so dense a population of a similar non-industrial character." Egyptians are essentially a gregarious people, isolated dwellings being very rarely met with. The vast majority of the population is spread over two cities, 43 towns, and 3581 villages. The number of inhabitants per 100 houses is returned in this census as 581 for the country as a whole, the range extending between 319 and 947. The total number of inhabited houses is 1,927,352 as compared with 1,418,891 in 1897. The house was the smallest structural unit dealt with except in Cairo, Alexandria, and Port Said, where an attempt was made to ascertain the number of living rooms per house. The data obtained, Sir Eldon Gorst fears, are not very trustworthy, but so far as they go are interesting. "If they are to be believed," he continues, "overcrowding is present in three out of the 13 divisions of Cairo. The English standard of overcrowding is a house containing more than two persons per room, and in six divisions is this proportion exceeded. ..... Turning to Alexandria we find that three out of the seven divisions are overcrowded. ..... The density of Port Said is 198 persons per 100 rooms, just below the overcrowding limit."

Public Health.—In 1908 there were in Egypt 21 general hospitals open to the public and containing 2153 beds. The number of in-patients treated during the year was 33,241. In 1888 there were 20 hospitals open, but the number of patients treated in them was only 11,834. The number of out-patients seeking relief in 1908 was 181,580, but in 1888 this service was non-existent except at Kasr-el-Aini, where an out-patient department had been inaugurated a year or two previously. Sir Eldon Gorst adds that, "in addition to the provision of hospitals, efforts are being made to bring simple medical aid within the reach of the people in the more remote villages, and with this object the Sanitary Department is instituting gradually in every district fully equipped dispensaries and first-aid establishments, under the direction of the local medical officer. There are at present 48 of these dispensaries, and the total number of applications for assistance was 38,000, as against 24,500 in 1907." Dispensaries on the lines indicated were first started in 1887, when seven establishments were opened in suitable localities. The following year three more were opened, and in 1889 there were altogether 13 in active operation. The travelling ophthalmic hospitals instituted by Sir Ernest Cassel have now become a branch of the Public Health Department, and according to Sir Eldon Gorst "it may be hoped that in time permanent eye hospitals will be established in all the larger towns, combined with travelling hospitals for the country districts. During 1908 7764 patients were treated, and the number of cases refused on account of lack of accommodation was 10,445." The permanent eye hospital at Tantah built by the Government was completed and opened to the public in November. At Assiout, where the inhabitants have subscribed £E5000 for the purpose, it is hoped that a new ophthalmic hospital will be opened shortly; and at Mansourah, where a local notable has contributed a similar sum, there is every prospect that a permanent institution for eye affections will soon be completed. In this connexion it may be mentioned that the Egyptian Government has recently decided to support the annual cost of maintaining all such hospitals as may be constructed by private enterprise. In a note submitted by the Financial Adviser and quoted by Sir Eldon Gorst we find it stated that an additional sum of £E17,340 has been allocated between the Government hospitals and prisons in the Budget for 1909; and also that £E38,000 have been provided for the construction of the new lunatic asylum at Khanka and for increasing the accommodation at the Abbassieh Asylum.

For the long-delayed Cairo drainage scheme a grant of £E70,000 has been authorised; and as the consent of all the Powers to an augmentation in the house tax of the city from 8 to 10 per cent. has now been received there is at least a good prospect that this most necessary work will soon be commenced. The important subject of a good water-supply for the capital of Egypt is still under discussion, but it is hoped that within a reasonable time a definite conclusion may be reached.[2] Means have been found to secure the removal of iron and manganese, but the water still remains too hard and has not as yet attained to a standard "approximating in character to that of the Nile." In the second city, Alexandria, the great question of drainage is still in abeyance. Sir Eldon Gorst says that an approved scheme has now been completed, but until some way of raising funds for its execution can be found this essential work cannot be proceeded with.

(To be concluded.)

[1] In the return the augmentation is shown as 1·5 per cent. but this is evidently a printers' error.

[2] For a full account of the proposed drainage of Cairo and the various schemes that have been advocated we may refer to articles which have appeared in THE LANCET of April 3rd (p. 1014) and 24th (p. 1209) and May 1st (p. 1279) and 8th (p. 1350), 1909.

Public Health.

ANNUAL REPORTS OF SCHOOL MEDICAL OFFICERS.

The City of Exeter.—The inspection of the school children in this district is carried out by Mr. P. H. Stirk, a specially appointed officer, who apparently devotes his whole time to the duties of the office. There are in the city 21 schools, comprising 42 departments and 7521 children, and the school medical officer is assisted by one school nurse, who is present at the examinations and visits the homes of the children to impress upon the parents the importance of acting upon the advice of the medical officer, and assists them in dealing with verminous conditions. Mr. Stirk thinks that the inspections during 1908 did not interfere with the grant-earning capacity of the schools except in cases where scholars were kept away from the schools by the parents in order to evade the examinations. He suggests, however, that the Board of Education should sanction the use of the central office for difficult cases which it is impracticable to examine at the schools, and that the time so occupied should be recognised as part of school attendance. In all 880 boys and 880 girls were examined in the schools and 40 children in their own homes, making a total of 1800, this number including 366 known to be defective by the teachers. Exclusive of the verminous, ill-clad, and ill-nourished, 743, or 42·2 per cent., were either physically or mentally defective. The time occupied in the examination of each child inclusive of completing the

tabular records was approximately 12 minutes. The parents and the school nurse are informed of the defects in each case and the nurse repeatedly visits the home of the child until treatment is obtained or a refusal to obtain treatment given, but at the end of three months where no treatment has resulted the case comes up for re-consideration. As to the sources of treatment, all patients able to pay are referred to their private medical practitioners for medical, surgical, or dental assistance, but apart from these cases use is made of one or other of the charitable institutions with which Exeter is richly endowed—i.e., the Royal Devon and Exeter Hospital (200 beds), the West of England Eye Infirmary (80 beds), the Exeter Dispensary, and the Exeter Dental Hospital. As regards the Eye Infirmary a subscriber's recommendation is necessary before advice can be obtained and such recommendation does not include the cost of glasses, which varies from 2*s.* 6*d.* to 7*s.* 6*d.* per pair. Teeth are extracted at the Dental Hospital free of charge except where an anæsthetic is required, in which case a subscriber's letter is necessary. It appears that 65·1 per cent. of the children recommended for treatment have obtained it in a satisfactory fashion, but in 24 cases the parents declined to take any action. There were 35·2 per cent. of the girls in a verminous condition, and Mr. Stirk remarks that it is "a deplorable fact that the children of clean, respectable parents cannot be sent to the public elementary schools without the certainty of contracting at some time or other this disgusting and entirely preventable condition." He trusts that the Children Act which is now in force will be taken full advantage of in the case of those verminous children who are habitually neglected.

Considerable difficulty is experienced in persuading the parents to take action with regard to their children's teeth, and Mr. Stirk points out that the number of recruits rejected by the military authorities on account of dental insufficiency in 1907 was nearly double that for any other defect. Although in 1906 the standard of "masticatory efficiency" was lowered and the dental treatment of recruits introduced, in 1907 no less than 48·17 per 1000 of the recruits were rejected. Of the total number of children 11·5 per cent. were habitual mouth-breathers, a circumstance generally due to enlarged tonsils, adenoids, nasal obstructions due to enlarged lower turbinate bones or deviations of the nasal septum. 6 per cent. of the children had enlarged tonsils and adenoids, and Mr. Stirk insists upon the uselessness of having adenoids removed unless their removal is followed by systematic and suitable breathing exercises. It is of interest to observe that of all the children examined only one showed definite pulmonary tuberculosis and only seven children showed other tuberculous lesions. But, as Mr. Stirk points out, the majority of children with tuberculous lesions do not attend school. An interesting section of the valuable report before us relates to the subject of the correlation of the school medical department with that of the medical officer of health. On every Friday the head teacher compiles a return of all children absent from school during the week from illness, together with the supposed cause of absence, and these returns, after tabulation of the children absent from infectious disease, are sent by the school medical officer to the medical officer of health, any doubtful case being visited by the health visitor to verify the supposed cause of illness. On the other hand, the medical officer of health notifies to the education authority all cases of notifiable infectious disease amongst school children or in houses in which school children reside, furnishing also the names of children who have been excluded from school on this account. Mr. Stirk is, he reports, preparing a "susceptibility table," which would show in the event of an outbreak of infectious disease the number of children who are unprotected in each school. So far it has been found that the children inspected have suffered from the common infectious diseases as follows: measles, 70 per cent.; whooping-cough, 49 per cent.; chicken-pox, 25 per cent.; diphtheria, 25 per cent.; and scarlet fever, 7 per cent.

The County of Surrey.—The Surrey county council has not apparently acted upon the spirit of the circulars of the Board of Education in so far as making its medical officer of health the superintending officer of school inspection is concerned, since Dr. T. Henry Jones reports directly to the Education Committee. It has, however, adopted what is described as a combined scheme whereby whole-time assistant medical officers have been appointed for the routine inspection of school children, while the services of the medical officers of health are "retained for general hygienic and emergency work in the schools of their own districts." For the purposes of the inspection of school children the administrative county has been divided into four parts and an assistant medical officer appointed for each district. Under the supervision of Dr. Jones, the chief medical officer, each assistant medical officer is responsible for the routine inspection in his district and resides at some convenient centre in such district. We notice that three of the four officers appointed possess the diploma of public health. Dr. Jones states that he is in constant communication with the medical officers of health upon all matters relating to the public health part of the work, and the medical supervision of the schools is so arranged as to avoid any overlapping of the function of the Education Authority and of the various sanitary authorities. The number of school children in the county area (exclusive of the boroughs) is 60,970, and the number allocated to each assistant medical officer varies from 9554 to 18,084. The total number of children at all ages actually inspected was 11,184, but the detailed report relates to the 10,281 routine inspections. Of these, 2017, or 19·6 per cent., were found to be suffering from defects calling for recommendations for treatment. But in addition to these recommendations the attention of teachers was called to 1027 children whose condition called for some modification of school work. The average time occupied by each inspection was under eight minutes, but it is not stated whether this time includes a record of the observations. Amongst other things, the children were inspected as regards their vaccination; 89·3 per cent. had been vaccinated, 8·7 were unvaccinated, and as to 1·9 per cent. no information was forthcoming. Presumably if they had been vaccinated the cicatrices had faded. With respect to the treatment of diseased conditions, it was ascertained in February, 1909, that nothing had been done for 55·7 per cent., while in 28·3 per cent. treatment of a satisfactory character had been procured. Some of the parents did not, it seems, concur in the need for any treatment, it being said that "the teeth did not affect health" and as regards both squint and enlarged tonsils "the children would grow out of them." Sometimes the fact of the father being out of work or earning only 14*s.* a week militated against treatment, since no money or time could be spared for the necessary journeys to hospital. In fact, this county forms an interesting contrast to the city of Exeter, where practically all the cases could receive treatment without expenditure or delay. In the Surrey report it is interesting to note that none of the parents referred to Poor-law medical treatment. If it was procured no mention is made of the fact. In connexion with this problem of treatment Dr. Jones thinks that there are but few districts in which arrangements might not be made for the treatment of the common defects by local medical men, and in his view many of the medical practitioners would treat really necessitous school children at reduced fees, which would amount to less than the cost of journeys to hospital. It seems, in fact, that experiments in the above sense are already in progress, and some of the local medical men have undertaken to estimate the visual defects of school children and obtain spectacles for such children at cost price from the makers at nominal inclusive fees, provided that the social circumstances of the cases are carefully investigated beforehand and that the children are recommended by the school managers. Some investigations were made in the Mitcham district into conditions of underfeeding among children, and Dr. Jones reports that the employment of the mothers has a marked effect upon the condition of their children. Such children, it is added, often enter school at five or six years of age untrained in proper habits and unable to speak properly.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 76 of the largest English towns 8048 births and 4375 deaths were registered during the week ending May 29th. The annual rate of mortality in these towns, which had been equal to 13·7 and 14·7 per 1000 in the two preceding weeks, declined again to 13·9 in the week under notice.

During the first eight weeks of the current quarter the death-rate in these towns averaged 15·1 per 1000; the rate in London during the same period did not exceed 14·6. The lowest recorded annual death-rates in these towns last week were 6·0 in Leyton, 6·5 in Walthamstow, 6·7 in Smethwick, and 7·6 both in Hornsey and in Hastings; the rates in the other towns ranged upwards, however, to 20·7 in Rhondda, 21·1 in Oldham, 21·8 in Middlesbrough, and 23·1 in Warrington. In London the recorded death-rate during the week did not exceed 13·4 per 1000. The 4375 deaths from all causes in the 76 towns last week showed a decline of 275 from the number returned in the previous week, and included 417 which were referred to the principal epidemic diseases, against 395 and 413 in the two preceding weeks; of these 417 deaths, 178 resulted from measles, 102 from whooping-cough, 49 from diarrhœa, 39 from diphtheria, 33 from scarlet fever, and 16 from "fever" (principally enteric), but not one from small-pox. The 417 deaths from these epidemic diseases last week were equal to an annual rate of 1·3 per 1000, against 1·2 and 1·3 in the two preceding weeks. No death from any of these epidemic diseases was registered last week in Blackburn, Walthamstow, Leyton, Northampton, and in six other smaller towns; the annual death-rates therefrom ranged upwards, however, to 2·6 in West Ham, 3·4 in Norwich, 4·1 in Salford, and 9·5 in Wolverhampton. The fatal cases of measles in the 76 towns, which had steadily declined in the ten preceding weeks from 438 to 168, rose again in the week under notice to 178, and caused annual death-rates ranging upwards to 2·2 in Salford, 3·4 in Norwich, and 6·5 in Wolverhampton. The 102 deaths from whooping-cough showed a further slight increase upon the numbers returned in the two previous weeks, the highest death-rates from this disease last week being 1·2 in Wigan, 1·5 in Middlesbrough, and 2·1 in Swansea. The 49 deaths attributed to diarrhœa also showed a slight increase. Of the 39 deaths referred to diphtheria (a decline of 12 from the number in the previous week), four occurred in Birmingham and King's Norton, two in Salford and in Hull, and 19 in London and its suburban districts. The 33 fatal cases of scarlet fever exceeded the number in the previous week by one, and included five in Birmingham and Smethwick, seven in Manchester and Salford, three in Liverpool, and two in Sunderland. The 16 deaths referred to "fever" were fewer by four than the number returned in the previous week, but included three in Manchester and Salford. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had been 2173 and 2234 at the end of the two preceding weeks, had further increased to 2254 on Saturday last; 335 new cases were admitted to these hospitals during last week, against 309, 313, and 348 in the three preceding weeks. The registered deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 212, 222, and 214 in the three preceding weeks, increased again to 225 in the week under notice and exceeded by 12 the corrected average number in the corresponding week of the five years 1904–08. The deaths in London referred directly to influenza, which had been 20 and 19 in the two preceding weeks, further declined last week to 17. The causes of 33, or 0·8 per cent., of the deaths registered last week in the 76 towns were not certified either by a registered medical practitioner or by a coroner. The causes of all the deaths registered during the week were again duly certified in Leeds, West Ham, Newcastle-on-Tyne, Bradford, Salford, Hull, and in 55 other smaller towns; the 33 uncertified causes of death included eight in Birmingham, six in Manchester, three in Liverpool and in Sheffield, and two in Sunderland and in South Shields.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 950 births and 596 deaths were registered in the week ending May 29th. The annual rate of mortality in these towns, which had been equal to 14·9 and 17·5 per 1000 in the two preceding weeks, declined again to 16·7 in the week under notice. During the first eight weeks of the current quarter the death-rate in these Scotch towns averaged 17·0 per 1000, while in the 76 large English towns the mean death-rate during the same period did not exceed 15·1. The death-rates last week in these Scotch towns ranged from 10·8 and 11·6 in Greenock and Leith to 18·2 in Paisley and 19·4 in Dundee. The 596 deaths from all causes in the eight towns showed a decline of 28 from the number returned in the previous week, and included 68 which were referred to the principal epidemic diseases, against 78, 47, and 76 in the three preceding weeks. These 68 deaths were equal to an annual rate of 1·9 per 1000, against 1·3 and 2·1 in the two preceding weeks; the mean death-rate last week from these principal epidemic diseases in the 76 large English towns did not exceed 1·3 per 1000. Of the 68 deaths from these epidemic diseases last week in the Scotch towns, 40 resulted from whooping-cough, 14 from diarrhœa, five from scarlet fever, five from diphtheria, three from measles, and one from "fever," but not one from small-pox. The fatal cases of whooping-cough in the eight towns, which had been 41, 17, and 38 in the three preceding weeks, rose again to 40 last week, of which 24 occurred in Glasgow, seven in Edinburgh, and three both in Dundee and in Greenock. The 14 deaths attributed to diarrhœa showed a further slight decline from the numbers in recent weeks, but included five in Glasgow, five in Dundee, and two both in Edinburgh and in Aberdeen. Four of the five fatal cases of scarlet fever were returned in Glasgow; and the five deaths from diphtheria included two in Glasgow and two in Paisley. All the three fatal cases of measles occurred in Paisley; and the death from "fever" (certified as cerebro-spinal meningitis) was registered in Edinburgh. The deaths referred to diseases of the respiratory organs in the eight towns, which had been 88, 92, and 109 in the three preceding weeks, declined again last week to 94, but exceeded the number returned in the corresponding week of last year by nine. Seven deaths in the eight towns resulted from violence, of which five occurred in Glasgow and two in Dundee. The causes of 12, or 2·0 per cent., of the deaths in the eight towns last week were unspecified or uncertified; in the 76 English towns the proportion of uncertified causes of death last week did not exceed 0·8 per cent.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 18·5 and 22·3 per 1000 in the two preceding weeks, declined again to 21·7 in the week ending May 29th. During the first eight weeks of the current quarter the death-rate in the city averaged 23·0 per 1000, whereas the mean rate during the same period did not exceed 14·6 in London and 16·6 in Edinburgh. The 166 deaths of Dublin residents from all causes during last week showed a decline of four from the high number in the previous week, and included 13 which were referred to the principal epidemic diseases, against 11 and nine in the two preceding weeks. These 13 deaths were equal to an annual rate of 1·7 per 1000, the death-rate from these principal epidemic diseases in the same week being 1·5 both in London and in Edinburgh. Of the 13 deaths from these epidemic diseases in Dublin last week, six resulted from whooping-cough, four from diphtheria, two from "fever," and one from diarrhœa, but not one either from measles, scarlet fever, or small-pox. The fatal cases both of whooping-cough and of diphtheria showed a marked increase upon recent weekly numbers. The 166 deaths registered last week included 32 of infants under one year of age and 47 of persons aged upwards of 60 years; both these numbers showed a slight decline from those in the previous week. Four inquest cases and six deaths from violence were registered last week, and 77, or 46·4 per cent., of the deaths occurred in public institutions. The causes of all but one of the 166 deaths registered last week in Dublin were duly certified; in London the causes of all but one of the 1240 registered deaths were also duly certified, while in Edinburgh the proportion of uncertified causes was equal to 3·7 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Her late Majesty's Order in Council of April 1st, 1881:—Staff-Surgeon Robert Robertson Fasson has been allowed to withdraw from His Majesty's Naval Service, with a gratuity.

The following qualified candidates for the Naval Medical Service have been appointed Surgeons in His Majesty's

Fleet:—Kenneth Hill Hole, Gilbert Francis Syms, Arthur Addison Sanders, Michael Paul Fitzgerald, John Hadwen, Harry Williams Nicholls, Raymond Paul Middleton Roberts, Alfred Graham Malcolm, Horace Charlton Devas, Henry Burns, Hugh Francis Briggs, Gordon Alexander Jackson, William Miller, James Stewart Orwin, and James Barrett (dated May 14th, 1909).

The following appointments are notified:—Fleet-Surgeons: A. G. Andrews to the *Superb;* A. M. Page to the *Swiftsure;* J. A. Keogh to the *Jupiter;* J. L. Smith to the *Exmouth;* J. E. Coad to the *Nelson;* G. A. Waters to the *Drake;* W. E. Marshall to the *Excellent*, additional for the *Revenge;* and T. Austen to the *Achilles*. Staff-Surgeons: R. A. Ross to the *Illustrious;* and J. W. W. Stanton to Plymouth Hospital. Surgeons: B. R. Bickford to the *Superb;* P. D. M. Campbell to the *Excellent*, additional for the *Grafton;* A. R. Fisher to the *Jupiter;* F. G. Hitch to the *Shannon;* and R. L. Jones to the *Exmouth*.

ROYAL ARMY MEDICAL CORPS.

Captain J. W. S. Secombe has been appointed Officiating Sanitary Officer, 3rd (Lahore) Division, vice Captain J. H. Brunskill, proceeding on leave.

TERRITORIAL FORCE.

Royal Army Medical Corps.

1st London (City of London) Field Ambulance: Lieutenant Andrew Elliot, from the 2nd London (City of London) Field Ambulance, to be Lieutenant (dated March 4th, 1909).

3rd South Midland Field Ambulance: Charles Corfield to be Lieutenant (dated March 18th, 1909). Alfred Coleridge to be Lieutenant (dated March 23rd, 1909).

1st Welsh Field Ambulance: Lieutenant Thomas Donovan to be Captain (dated Dec. 12th, 1908).

1st London (City of London) General Hospital: Officers whose services will be available on mobilisation: Captain James Calvert to be Major (dated Feb. 20th, 1909); and Captain William McAdam Eccles to be Major (dated March 13th, 1909).

1st Northern General Hospital: The undermentioned to be officers whose services will be available on mobilisation (dated March 30th, 1909): To be Lieutenant-Colonels: David Drummond, Sir Thomas Oliver, George Walter Ridley, and Albert Morton Martin. To be Majors: Henry Brunton Angus, Thomas Beattie, William Errington Hume, William George Richardson, William Drewett Arnison, John Dobson Wardale, and Robert Patton Ranken Lyle. To be Captains: Joseph William Leech, George Grey Turner, Horsley Drummond, Alfred Parkin, George Hall, Thomas Moffatt Allison, Joseph Collingwood Stewart, William Edward Moore Ede, Samuel Short Whillis, Daniel Wells Patterson, Thomas Gowans, Herbert James Slade, Henry Herbert Markham, William John Phillips, William Seymour.

For attachment to Units other than Medical Units.—Frank John Hathaway (late Lieutenant, United Services College Cadet Corps), to be Lieutenant, with precedence as from April 8th, 1907 (dated July 15th, 1908).

VOLUNTEERS.

Cadet Corps: United Services College, Windsor: Lieutenant Frank J. Hathaway resigns his commission (dated July 15th, 1908).

THE GERMAN ARMY MEDICAL COLLEGE.

The current issue of the *Broad Arrow* contains a brief but interesting note on the German Army Medical College, the senior course of which is not quite similar to our own. "The course at the Kaiser Wilhelms Institut," says our contemporary, "is in reality that of a cadet school like the French school at Lyons. The Germans have no 'Applikations Schule' like the 'Val de Grâce' or the school at Vienna, so that there is no actual equivalent of our Royal Army Medical Corps. The junior Stabsärzte and the senior subaltern medical officers must go through a post-graduate course called the Fortbildungscursus or operations course. They are placed on command by the War Office for this. The course consists of attendance at the clinics of universities and larger hospitals. Lieutenant-Colonel W. S. Macpherson, R.A.M.C., attached to the department of the Chief of the General Staff, in a note to his handbook says that recently the higher administrative officers have also been made to attend the operations course at the Kaiser Wilhelms Akademie. He also states that recently an institute for post-graduate study, the Kaiserin Augusta Haus, was opened in Berlin, and army medical officers may go through a post-graduate course (three months) there. Apart from this, scientific libraries for the education of army surgeons are established (usually) in headquarters' garrison hospitals of army corps." In the summer staff rides are organised, and in the winter months medical officers on the active staff are obliged to write essays on some special scientific work, the subject being set by the Director-General. Special facilities are given for post-graduate study, and war games also form a part of the educational studies of the medical officers.

Correspondence.

"Audi alteram partem."

THE MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.

To the Editor of THE LANCET.

SIR,—Notwithstanding the letters appearing in your columns and your own remarks thereon, I have been surprised, in conversation and discussion with many members of our profession, to find how few are alive to the important—I would say momentous—issues which must of necessity be involved when putting into practice the Act of Parliament which gives the London County Council the right to procure medical aid for children educated in their schools. For the moment the London County Council are not of one mind. They are possibly embarrassed at the magnitude and delicacy of the task before them. But whatever may be the decision of the Council, it behoves the whole profession to be on its guard and to watch the approach of what may prove to be of prime importance to every member of every branch of medicine and surgery.

Should the Council, by means of alluring offers of subsidy, seduce the managing committee of any hospital to treat their afflicted children, it must follow that both you and I contribute through our rates to supply this subsidy. The unfortunate assistant physician or surgeon will have to submit to a double tax—he will have to meet, in addition to his rates, a demand for extra time which he will be compelled to devote to the out-patient department.

Should our hospital authorities place themselves at the mercy of the London County Council in accepting payment, they must not be surprised at strict supervision—may be, interference—at the hands of those who will naturally wish to know how their patients are being cared for. Much more might be said. I prefer for the moment to press the main question, which appears to me to be of such importance that any action eventually taken should be a concerted one and not one left to the individual opinion of any one hospital board.

I am, Sir, yours faithfully,

Green-street, Park-lane. DONALD W. C. HOOD.

To the Editor of THE LANCET.

SIR,—The Education (Administrative Provisions) Act of 1907 authorises the local education authority, with the consent of the Central Government, to establish and maintain at the cost of the rates school hospitals with both in- and out-patient departments and country branches.[1] I submit that in the interest of the patients this should be done; to establish only out-patient departments for eye and ear cases is, owing to the inadequate support given to voluntary hospitals, to lose a certain proportion of the chronic bone and other cases which under early and continuous treatment might be saved.

Of the children of school age 86 per cent. are in public elementary schools, 10 per cent. in Poor-law schools, orphanages, or ill, and only 4 per cent. are being educated at the cost of their parents; thus if school hospitals are established about 95 per cent. of the children will be treated in them and only 5 per cent. left to the open competition of the profession. This would be a great, but, as I think, necessary evil; in order to minimise it as far as possible the following steps should be taken:—1. The

[1] THE LANCET, Nov. 30th, 1907.

appointments should be made not by a subcommittee of the education committee, but by an electoral board on which the medical profession is represented. 2. No applicant should be prejudiced in his candidature because he does not intend to confine his private practice to the specialty of the appointment, or because he proposes to accept less than guinea fees. 3. That any qualified practitioner in the district may, under suitable safeguards, avail himself of the advantages of the clinical and pathological laboratories of the school hospital, both for the diagnosis and treatment of any school child he may have as a patient and for the purposes of research. In this connexion it must be remembered that the advances of medicine tend to make the investigation and treatment of disease more elaborate and the apparatus more costly; it is one thing to buy a stethoscope, another an x ray outfit. 4. That medical certificates given by an unattached practitioner should carry equal weight with one by an official, any difference of opinion that may arise being referred to an independent expert.

I am, Sir, yours faithfully,

May 31st, 1909. J. S.

A PLEA FOR THE USE OF ANTI-DIPHTHERITIC SERUM.

To the Editor of THE LANCET.

SIR,—I read with much interest the paper by Dr. A. A. Warden in THE LANCET of May 15th on the use of anti-diphtheritic serum in laryngitis, the sequence of measles, but I gather therefrom that when the serum was used diphtheria in reality existed. That this serum has a wider field of application than for the treatment of pure diphtheria I am quite convinced, and I first arrived at this conclusion entirely through accidental circumstances. I now nearly always resort to it in cases of quinsy or bad scarlet fever throats in preference to the polyvalent serum.

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appointments should be made not by a subcommittee of the education committee, but by an electoral board on which the medical profession is represented. 2. No applicant should be prejudiced in his candidature because he does not intend to confine his private practice to the specialty of the appointment, or because he proposes to accept less than guinea fees. 3. That any qualified practitioner in the district may, under suitable safeguards, avail himself of the advantages of the clinical and pathological laboratories of the school hospital, both for the diagnosis and treatment of any school child he may have as a patient and for the purposes of research. In this connexion it must be remembered that the advances of medicine tend to make the investigation and treatment of disease more elaborate and the apparatus more costly; it is one thing to buy a stethoscope, another an x ray outfit. 4. That medical certificates given by an unattached practitioner should carry equal weight with one by an official, any difference of opinion that may arise being referred to an independent expert.

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A PLEA FOR THE USE OF ANTI-DIPHTHERITIC SERUM.

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received a very unfavourable reception from some of the members of the committee. It can scarcely be contended that the salaries at present paid, £175 per year to each assistant, are sufficient, or that the suggested increase, to £225 rising to £250, is too much to pay for properly organised and properly carried out work. There is no doubt, however, that many people are beginning to wonder what the medical inspection scheme is going to lead to and how the expense is to be met, whilst in the particular instance under consideration some of the members of the committee were no doubt irritated by what must have seemed to them the strangely contradictory reports of the medical inspectors concerning the prevalence of pulmonary tuberculosis; one inspector reporting under the head of phthisis 0·8 per cent of defective children, and another 15·5 per cent., whilst no proof was furnished that either the lower or the higher estimate was correct. The desirability of recognising early stages of pulmonary tuberculosis is undoubted but the advisability of publishing unverified conclusions is doubtful.

Educational Standards and Inborn Incapacity.

At the last meeting of the Birmingham education committee an interesting discussion took place, originating in association with the statement that 25·7 per cent. of the children did not attain Standard VI. before leaving school, and with Mr. Cary Gilson's suggestion that it would be wise to provide a curriculum more suited to the requirements of the children who were not likely to reach the sixth standard. The suggestion was strongly objected to on the grounds that the children were not incapable of attaining the standard before the leaving age, but were prevented from attaining it by lack of proper school accommodation, migration of parents, sickness, and by the fact that many of them had to work before going to school and were too tired to learn. All these causes may be at work, and if carefully inquired into might serve to reduce the somewhat large percentage of those who seem to be incapable of attaining the much worshipped Standard VI., but the fact remains that many children, who cannot be classed as feeble-minded, are not capable of attaining the standard in the usual period. Many of our legislators apparently will not believe in the inborn incapability of some children. They are quick to recognise with regard to animals, and with regard to the men and women whom they utilise for business purposes, that some are more and some less capable, but when they have to deal with children they appear to think that every child is born with equal potentialities and is capable of being crammed with knowledge up to Standard VI. in a given time. It is a pity that many of those who occupy public positions with regard to education cannot be made to go through a well arranged course of study in biology. It might dispel some of their cherished ideas of natural equality under equal external conditions and induce them to cease, not only spending the people's money in trying to force the incapable to a height they cannot attain, but also to cease retarding the development of the better types by squandering what should be devoted to them upon the incapables. If medical men who know the truth would more frequently point out to the general public with whom they come in contact the fact that we are not born equally capable, and that it is the capable and not the incapable who should be fostered if the nation is to become stronger, the public might gradually be educated to recognise the folly of squandering its strength for the sake of maintaining and propagating weaklings, which seems to be the main object of many of the present-day sociologists.

The Birmingham Medical Benevolent Society.

At the annual meeting of the Birmingham Medical Benevolent Society Dr. Malet, the retiring President, was replaced by Sir Thomas Chavasse, and Dr. Simon was appointed President-elect. The directors reported that the funds of the society amounted to £16,060 14*s.* 6*d.*, of which £15,940 4*s.* 11*d.* were invested. During the past year two annuitants died and one was added to the list, the number being thus reduced to 25, and the total number of members at the end of the year was 390. This is a very small number out of a total of 4000 eligible medical men in the area covered by the society, and it is obvious either that the objects of the society or the means of attaining them do not appeal to the majority of medical men, or are not effectively brought to their notice. In a motion proposed by Dr. Thomas Wilson it was decided to admit lady practitioners to membership of the society.

The Monyhull Colony.

The Monyhull Colony for Epileptics and Feeble-minded was founded about 13 months ago with the object of furnishing the most favourable conditions for the epileptics and feeble-minded in the parishes of Birmingham, Aston, and King's Norton. It has not been long enough in existence to provide any very certain data with regard either to the cause of epilepsy or the most successful method of treating epileptics and the feeble-minded; therefore it is not surprising that the first annual report of the medical officer contains little but a record of the general improvement of the physical condition of the patients. It has been stated that the number of epileptic fits can be reduced by a "no salt" diet, and with the object of testing the statement 12 men and seven women have been placed upon such a diet, but Dr. B. F. Jordan, the visiting medical officer, is of the opinion that the experiment has not been continued long enough to justify the formation of a definite conclusion. It was noted, however, that some of the patients placed on the "no salt" diet developed a temporary dulness of manner. Dr. Jordan states that manual work, in the cases of the able-bodied patients, tends to reduce the number of fits, and he notes a marked tendency amongst the epileptics to sudden attacks of long-continued physical weakness appearing without adequate cause.

June 1st.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Scottish Dinner of the Indian Medical Service.

THE fourth annual Scottish dinner of the Indian Medical Service was held in the Caledonian United Service Club, Edinburgh, on the evening of May 28th, under the presidency of Sir Alexander Christison, Bart., the oldest member of the service present. Sir Alexander Christison, it may be stated, not only served through the Mutiny, but was also attached to a field hospital during the first Burmese war, and was then associated with the late Sir Joseph Fayrer. The other members of the service who attended the dinner were: Surgeon-General G. Bidie, C.I.E., Surgeon-Major-General P. S. Turnbull, K.H.S., Surgeon-General D. Sinclair, C.S.I., and Surgeon-General G. W. R. Hay; Colonel A. Stephen and Colonel W. P. Warburton, C.S.I.; Brigade-Surgeon-Lieutenant-Colonel J. Arnott, Brigade-Surgeon-Lieutenant-Colonel G. G. McLaren, and Brigade-Surgeon Robb; Lieutenant-Colonel Downie, Lieutenant-Colonel W. B. Bannerman, Lieutenant-Colonel G. J. H. Bell, Lieutenant-Colonel Smith, and Lieutenant-Colonel Lamont; Major C. J. Robertson-Milne; Captain Harvey, Captain G. H. Stewart, Captain Husband, Captain Masson, Captain Roberts, Captain Macrae, Captain Murison, Captain Kirkwood, and Captain Tarr. Apologies for inability to attend were received from Surgeon-General W. Watson, Surgeon-General Pinkerton, Lieutenant-Colonel F. Wyville Thomson, and Captain Fleming. The guests present were Sir J. Halliday Croom, Dr. W. Allan Jamieson, Mr. J. M. Cotterill, Colonel Corker, R.A.M.C., Dr. P. McBride, Dr. F. W. N. Haultain, and Lieutenant Turnbull of the 23rd Pioneers. A most delightful evening was spent, and brother officers who had not seen each other for many years—in one instance no fewer than 41—enjoyed the pleasure of meeting again and recounting the incidents of the intervals. After the usual loyal toasts had been honoured, Sir Alexander Christison, in a speech of great feeling, proposed the continuous prosperity of the Indian Medical Service. He alluded particularly to the recent death of Assistant-Surgeon W. W. Ireland, I.M.S., whose presence at the dinner in the previous year when he detailed the pathetic story of his all too brief career in the Service, will never be forgotten by those who were present. Dr. Ireland had actually signified his intention of being present on this occasion, and the speaker suggested that on behalf of the officers attending the dinner he should write to the family of the late Dr. Ireland expressing sympathy with them in their sudden bereavement. Then, after referring suitably to recent changes in the service he concluded by expressing the great pleasure he had experienced

that evening in meeting so many of the younger members of the service. Other toasts followed. Surgeon-General Sinclair proposed that of the "Royal Army Medical Corps," with which the Indian service is so closely associated in India, and Colonel Corker in acknowledging the toast referred to the many kindnesses he had received from officers of the Indian Service during the earlier years of his own career. Surgeon-General Hay proposed the "Royal Colleges of Physicians and Surgeons," to which the Presidents, Dr. Jamieson and Mr. Cotterill, replied in suitable terms, the latter alluding particularly to the revised standard of the Fellowship and its utility to members of the Service. Colonel Warburton, in conclusion, proposed the health of the Chairman, which was drunk with acclamation, as was that of Brigade-Surgeon-Lieutenant-Colonel Arnott, who had organised the dinner.

The Association for the Registration of Nurses in Scotland.

The executive committee of the Association for the Registration of Nurses in Scotland, at a meeting held in Edinburgh recently, passed a resolution expressing its satisfaction that the Prime Minister was unable to assent to the proposals of the deputation which waited on him on May 13th. This association (which represents, with a few exceptions, the opinion of the medical and nursing profession in Scotland) trusts that it will be afforded an opportunity of placing its views before any committee of the House of Commons that may be appointed to deal with this important subject. Although the association objects to both of the two Registration Bills already proposed the Scottish committee sees no reason why a Bill for the Registration of Nurses should not be introduced which would be satisfactory to England, Scotland, and Ireland, arranging for representative branch councils, and for a separate register for each country, to be embodied in one common register, the branch councils to supervise examinations in their own country, just as is done under the Medical Act (1858) and its subsequent amending Acts. The views held by this association coincide generally with the recommendations of the Select Committee which reported to Parliament in 1905 on the question of State Registration of Nurses. The executive committee instructed the honorary secretary to convey this resolution to the Prime Minister.

Forfarshire School Medical Officer.

At a special meeting of the public health committee of the county council held in Arbroath on May 22nd the question of appointing Dr. N. J. Sinclair, the medical officer of health of Forfarshire, as medical officer in connexion with the medical examination and supervision of school children in the county (excluding Dundee) under the Education Act (Scotland), 1908, was discussed. A memorandum as to the proposal by the Secondary Education Committee of Forfarshire set forth that this committee had resolved that the area of the committee, which extended to the county of Forfar (excluding Dundee, but including all the royal burghs and police burghs therein), should be a single area for the medical examination and supervision of school children; and that the county medical officer, subject to the approval of the county council, should be appointed to supervise the whole of the area; and that such assistance should be provided as experience showed to be necessary. It had been agreed by the committee (1) that, provided the county council agreed to pay one half of the expenses to be incurred by the county medical officer as such, and as school medical officer, the salary should be free of all expenses, and the committee should pay the other half of such expenses; and (2) that the salary of the school medical officer should be £200 per annum, free of all expenses. After discussion it was unanimously agreed that permission be granted to the Secondary Education Committee to appoint the county medical officer as school medical officer on condition that the proposed scheme be submitted to, and approved by, the public health committee, as enlarged to include the whole county council, and, further, that an allowance of £50 per annum be granted to the county medical officer, out of which the county medical officer shall meet all expenses in connexion with his work as county medical officer, and that he shall give up all right to consulting practice, the whole matter to be subject to the approval of the Local Government Board.

Peterhead Doctor's Action.

In the Aberdeen small debt court on May 27th Sheriff Laing decided on a case of considerable importance to the medical profession. Some time ago some workmen engaged at Peterhead in breaking up a wreck met with some accidents. They were in the employment of Mr. Baird, Aberdeen, and on the accidents happening the foreman called in Dr. Gillespie, giving Mr. Baird's name. The injuries being very serious the medical attendance was long, and on the account being rendered to Mr. Baird payment was refused on the ground that he had not employed any medical man and that the foreman had not his authority for doing so. Proof was led at length, and the Sheriff in giving judgment said: "It is common ground that defender would be liable for this doctor's account if he instructed him either expressly or by implication. There is no suggestion that the master instructed the doctor. The case for the pursuer is that he undertook liability by implication. I hold that the pursuer has proved an implied undertaking. Each of the employees, it is of interest to note, was taken to the same doctor by the same men and it is proved to my satisfaction that they said defender would see to the payment of doctors' charges. Even this, however, would not be sufficient, but I must hold it proved that the foreman reported the accidents immediately, and the fact that Dr. Gillespie had been called in to the defender, who did nothing to repudiate liability then. Not only so, but when he met the doctor some little time after he said nothing then as to non-payment. This is, I think, sufficient to infer adoption of Dr. Gillespie's employment and sufficient for the decision of the case in pursuer's favour."

Care of Consumptives: Proposed New Dundee Municipal Venture.

The subject of the care of consumptives by the municipality was introduced in a new form at a meeting of the public health committee on May 25th. It had been agreed that certain cases should be sent to the sanatorium at the expense of the municipality, but this scheme was dead and the question now was, What was to be done? The alternative to doing nothing was to take up a lesser scheme It was then moved and seconded that a subcommittee be appointed to report. The suggestion that this motion and two others dealing with compulsory notification of tuberculosis and an isolation block or hospital for advanced cases be sent to the same committee found no support.

June 1st.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Irish Primary Schools.

A DEPUTATION from the Women's National Health Association of Ireland waited on the Chief Secretary for Ireland at Dublin Castle on May 24th. The Countess of Aberdeen, in speaking on behalf of the mothers of Ireland, said they desired to urge upon the Government the necessity for provision for heating, cleaning, ventilating, and general sanitation of the primary school buildings in Ireland. The present lack of such provision constituted a grave danger to the health of the children. Several ladies having spoken, Mr. Birrell admitted at once that the state of too many of the schools was very bad. There was no educational rate in Ireland, and although the National Board of Education in Ireland year after year asked for a sum of £40,000 to provide proper school accommodation for Irish children, the Treasury refused on the ground that it was an unreasonable demand, as there being no school-rate in Ireland, the least the people could do was to see that the schools were in a proper condition to receive the children. Mr. Birrell said he would never assent to compelling parents to send their children to school in the unsatisfactory condition in which so many of the schools are. At present there was a Bill before Parliament to halve this cost of £40,000 and to provide that if the local authority levies the rate sufficient to meet half the expense the Treasury should pay the other half. Now, provided the people of Ireland unitedly supported the Bill before Parliament referred to by him and brought pressure on the managers of schools to raise half the sum, Mr. Birrell said he hoped to be able to overcome the objection of the Treasury, but otherwise he said they would hear no more of the Bill. Mr. Birrell said he had seen

schools in Ireland that it was positively cruel to expect children to go to, and he certainly thought they ought not to be compelled to go.

The Belfast Hospital for Diseases of the Nervous System.

At the annual meeting of the supporters of this institution held in Belfast on May 19th it was reported that there were 70 patients admitted during the past year and 523 extern cases. The total receipts were £643 10*s.* 1*d.* (of which sum £318 6*s.* 8*d.* were contributed by patients themselves), while the total expenditure was £625 15*s.* 10*d.*, and there is a balance in hand of £104 5*s.* 4*d.* The building debt has been reduced by £100.

Death of Dr. Samuel Macaulay, M.D. Q.U.I.

On April 22nd Dr. Samuel Macaulay died at his residence, Bloomfield, Belfast, in his fifty-third year. A native of co. Armagh, the son of the late Rev. James Macaulay, Drumhillery, Dr. Samuel Macaulay studied in Queen's College, Belfast, and graduated M.D., M.Ch. of the Queen's University in 1881. He practised for a time in England, but since his mother's death two years ago has resided in Belfast. Dr. Macaulay was unmarried.

Death of Mr. E. A. Kirkwood, L.R.C.P. & S. Edin., L.F.P.S. Glasg.

Mr. Kirkwood, a well-known practitioner in the North End of Belfast, died at his residence, Crumlin-road, after a severe illness, on May 23rd. A son of a Belfast man, Mr. Kirkwood was a student of the medical school in that city, and after attending Queen's College in 1897 obtained the L.R.C.P. & S. of Edinburgh. Mr. Kirkwood was honorary physician to the North Belfast Day Nurseries and medical examiner to the Amalgamated Society of Engineers. He was also a prominent member of the Masonic order. He leaves a widow, but no family.

June 1st.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Fight against Infectious Disease in France, Sweden, and Norway.

AT a meeting of the Academy of Medicine held on May 18th, M. Ferdinand Widal read, on behalf of M. Jules Courmont, a paper on the results obtained in Sweden and Norway in the fight against infectious disease. In Sweden the mortality has decreased from 17·7 per 1000 in 1881 to 14·3 per 1000 in 1906, and the infantile mortality from 112·7 per 1000 in 1881 to 83 per 1000 in 1904. The population has increased from 4,572,245 in 1881 to 5,537,055 in 1906. The mean mortality in France is 20 per 1000; at the rate which obtains in Sweden, France would gain nearly 250,000 lives per annum. At Stockholm the mean mortality from typhoid fever is 0·02 per 1000 inhabitants, while in France it is, in towns of over 20,000 inhabitants, 0·24. In Norway, since the law of 1900, every obvious case of tuberculosis has been notified, and disinfection is always obligatory after death.

The Relation of Peritonitis to Erysipelas.

At a recent meeting of the Society of Surgery, M. Vallas read a paper on this subject. One day last year he was called in to see a woman who showed signs of gastro-intestinal trouble, which were, however, indefinite and did not appear to call for operation. She got slightly better, but then a relapse occurred, the temperature ran up, the abdominal pains reappeared in a more acute form than before, and meteorism became marked. On a laparotomy being performed nothing wrong was found with either the appendix or the cæcum, but a loop of small intestine showed thinned patches covered with a greyish exudation. Recovery was uneventful, and the cause of the peritonitis remained a mystery until some days after the operation M. Vallas learned that the daughter of the patient had facial erysipelas. M. Vallas added that he had found two other cases in which peritonitis appeared to be attributable to a streptococcal infection.

Foreign Medical Students in France.

Statistics as to foreign students of medicine in Paris have often been published, but those dealing with the provincial faculties are less known. Lyons is the most important provincial centre and has at its mixed faculty 242 students. The Montpellier Faculty of Medicine has the greatest number of female medical students—namely, 98—of whom 78 are foreigners, and Montpellier, moreover, has the largest number of male foreign students—namely, 137—of whom 98 are Russians and 13 are Bulgarians. French female medical students go chiefly to Bordeaux, where there are 45 to only 6 foreign; and to Lille, where there are 32 and only 2 foreigners. Russians form by far the largest group of foreign students, for besides the 98 at Montpellier there are 30 at Nancy. At Nancy, too, there are 25 Bulgarian students in medicine.

Sick Soldiers and their Families.

The Under-Secretary of State at the Ministry for War has recently ordered that in future military patients are to be asked on entering hospital whether they wish one or more persons to be made acquainted with their illness, and for the exact address of such persons. In cases where the patient is unable to express any wish on this point news of his progress is to be sent regularly to his family through the municipal authorities concerned.

June 1st.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

The Second National Congress on Professional Maladies.

THE centre of hygienic interest was last week the Tuscan capital, where a National Congress, the second of the series, has been held in the Hall of the Duecento in the Palazzo Vecchio, on what is rather ambiguously styled "Malattie Professionali." By these maladies the reader is to understand the lesions, surgical and medical, incident not to the liberal callings but to the labourer and the artisan, the lesions, in fact, which have come under the purview of the great International Congress held during the present week in Rome. This premised, the above congress enlisted the support and presence of an influential body of the profession, mainly reinforced from Florence, its seat, and under the presidency of Dr. Gaetano Pieraccini, *privat-docent* in medical pathology at the Florentine "Istituto di Studi Superiori Pratici e di Perfezionamento." In a brilliant introductory address Dr. Pieraccini dwelt on the maladies to be considered and discussed by the Congress, demonstrating the increase both in number and intensity of these the lower we descend in the social scale—the tendency to contract them being greatest in the proletariat, as shown by the statistics not only of mortality but of one of their commonest sequelæ, crime. He was followed by the veteran hygienic reformer, the Senator De Cristoforis of Milan, who warmly seconded Dr. Pieraccini's "augurio" that the Government would in future show greater energy and zeal in mitigating the hardships, physicial and social, of the toiling masses. On its passing to the agenda of the programme the Congress heard with due interest and attention a masterly paper by Dr. Eugenio Tanzi, professor of psychiatry at the "Istituto," on the "Malattie Mentali di Lavoro" (mental disease as occasioned and conditioned by labour). An animated discussion followed, in which the medical schools of Milan, Naples, and Venice joined in amicable controversy with that of Florence, on whose part Professor Tanzi made an effective reply. Pellagra was another theme which evoked a conflict of views, Professor Devoto of Milan, who was the primary spokesman, eliciting approval, none the less cordial for being somewhat distasteful to national *amour propre*, by the contrast he drew between the Austrian *modus operandi* in combating the disease and that still practised in Italy. *Fas est et ab hoste doceri;* and *a fortiori* it is still more lawful to take a leaf from the book of an "ally!" Next in order and importance was Dr. Glibert's elaborate paper on the "Defence against Professional [Industrial] Maladies"—a luminous exposition drawn mainly from Belgian experience, and made still more telling by a series of "projections" taken from the Belgian Department of Labour. This was followed by a visit to the Arcispedale di Santa Maria Nuovo, where, guided by Professor Pieraccini, with the effective assistance of Dr. Giglioli, the congressisti were shown a number of typical cases of the maladies in question. Among the subsequent

papers special notice is due to that of Dr. Giglioli on the lesions occasioned by mercury, particularly in the mining districts—a paper followed by interesting, mainly confirmatory, comments, resulting in an "order of the day" to impress upon Government the urgent need of inspection, with a view to amelioration of the conditions under which the mines of Monte Amiata and Abbazia San Salvatore are worked. On similar lines two papers on Avvelenamento Cronico da Fosforo (Chronic Poisoning by Phosphorus) evoked fruitful discussion, Dr. Tria and Dr. Furno (their authors) leading up to another "ordina del giorno," urging, in the match-making industry, the replacement of the actively poisonous white phosphorus by the comparatively innocuous red phosphorus—an order of the day carried *nemine contradicente*. Other papers, hardly less interesting and ably handled, were those on "Quininic Prophylaxis in Theory and in Practice"; on the "Evils, Moral, Economico-political, and Hygienico-sanitary, of the Emigration from Southern Italy"; and an exceptionally brilliant communication by Dr. Tito Gualdi of the hygienic department of the Roman School, entitled "The Ten Years' Conflict against Malaria." This latter, which attracted to the auditory not a few members of Parliament and notabilities, male and female, of the general public, was illustrated with projections which put in vivid relief the successes gained in that conflict by the combined forces of medicine and legislation. The "Atti" or official report of the Congress, I may add, will be read with profit far beyond the circle originally addressed—forming as they do an effective *avant-coureur* of the proceedings which have taken place on still more extensive lines at the International Congress in Rome.

May 28th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Remarkable Powers of Memory Manifested in an Idiot.

AT a recent meeting of the Society for Psychiatry and Neurology Dr. Witzmann showed a man, aged 20 years, who possessed an extraordinary memory for certain of the data recorded in calendars. This individual, who, moreover, was an inmate of an asylum for idiots, could with the utmost readiness tell what day of the week it had been or would be on any given day of the month in any year during the long period from the year 1000 of the Christian era until the year 2000. Although he has devoted much attention to the case, Dr. Witzmann has not yet succeeded in finding out by what means the young man has acquired this faculty, at once so marvellous and so rare. He believed that the patient had found out for himself some kind of code by which he worked, for he was capable of answering a question as to a given date and the corresponding day of the week in an instant, but his arithmetic was faulty when he was made to set down the figures of a computation based on the ordinary tables appended to some of the calendars. The results stated by him off-hand were always correct; for instance, some of the test questions put to him were as follows. Question: What was the day of the week on Oct. 3rd, 1907? Answer: Thursday. Question: What was the day of the week on June 14th, 1808? Answer: 1808 was a leap year; June 14th was a Tuesday. Question: How long will the carnival last in 1924? Answer: 58 days. (This was easily found from the calendars used in Roman Catholic countries.) The personal history of the patient showed no reason for his idiotic condition and the family history gave no assistance. He could read and write only tolerably well, was backward at arithmetic, and had no aptitude whatever for manual work; he could, therefore, be employed only as an errand boy or in some similar capacity. It was a remarkable fact that his knowledge of the calendar did not extend beyond the year 2000. His powers stopped suddenly at this point, and yet by using tables and following the established rules the results desired could be obtained with equal facility whether the dates were earlier or later than the year 2000. An explanation was furnished by the fact that all calendars at present accessible to the man extended only to the year 2000. It would seem that he had learned by heart the date of Easter of each of the 1000 years from 1000 to 2000. If, therefore, he has at his disposal something of the nature of the tables appended to the calendar impressed on his brain they might enable him to read off, as it were, the proper answers to the questions proposed. In addition to knowing the day of the week for each day of the month, he knew also the patron saint of each day of the month. Such persons have several times been observed by neurologists. Idiots have been found to possess a special faculty of storing in their brains and reproducing at will masses of figures, like railway time-tables, Budget statistics, and entries in bank-books. The after-history of most of these mentally afflicted "brain athletes," as they have been called, showed that they had a tendency to either complete amentia or complete paralysis. The patient under consideration was already at times experiencing hallucinations.

Improved Conditions in the Army Medical Service.

Some important new conditions have lately been introduced in the arrangements necessary to bring up the officers of the Army Medical Corps to the required number. The recent preparations that were made in expectation of war showed that in spite of universal compulsory service the number of medical officers available would be insufficient for the requirements of a modern army. The Minister of War has therefore announced that medical men not over 30 years of age will, on making application, receive a grant not exceeding £250, in repayment of the cost of their professional education, on condition that they undertake to enter the service and remain with the colours for at least six years. Medical students on binding themselves to the same conditions will receive a monthly grant of 5 guineas, and on taking their degree the remainder of the sum at once, till the £250 have been paid them; they will also, when called upon for service, receive an extra £3 per month. They will have facilities for continuing their studies after graduation, for at least a year in clinics, at the expense of the Ministry of War. The applicants must satisfy the Board of Studies of the Ministry as to their bodily and mental fitness for military service. The openings thus offered to students are tolerably good, for within six years after obtaining the degree of M.D. they may attain the rank of regimental surgeon; on the other hand, men who have served already their term with the army, on entering now are entitled to have this service considered in their promotion. The facilities for study are also good, as the Government keeps in every clinic a number of posts open for its surgeons, and if the surgeon retires after only ten years' service, he becomes entitled to a pension of about £100 a year.

Pellagra in Austria.

Pellagra has existed in the eastern part of the Austrian Empire for many years, and in 1905 a vigorous attempt was made by the Government to check the disease. When it was proved that pellagra was caused by eating damaged maize, good flour was distributed by public officials, and means were taken to inform the population how to avoid the danger. In various districts the Government established bakeries where bread could be obtained at a nominal cost, and a good result was obtained in diminishing both the prevalence and the severity of the disease. Successive bad harvests have, however, impoverished the people, and thereby to some extent neutralised the good work that has been done; while on the other hand, the more careful examination of hitherto unsuspected districts has also caused an increase in the number of cases reported. In 1901 there were 251 cases reported in the affected district (Bukowina), which has an area of about 5000 square miles with a population of over 1,500,000. In 1906 there were 1575 patients, in 1907 the number was 2387, and in 1908 it was 2952. The cases of pellagra in the hospitals are also more numerous than formerly. In 1901 only five patients were admitted, whereas last year there were 85. There were 34 districts in which the public authorities last year instituted preventive measures at a cost of £3500. In the result 76 per cent. of the patients were reported as improved, 22 per cent. were not improved, 1 per cent. became worse, and 1 per cent. died. The treatment consisted, as mentioned before, in free distribution of maize, healthy food, administration of iron and quinine free of charge, and, if necessary, in surgical interference. This year a sum of £10,000 has been granted by the Government in order that the prophylactic and therapeutic measures directed against pellagra may be extended to all affected districts.

May 26th.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Infectious Diseases at the Sites of the Recent Massacres.

FROM different parts of Asia Minor where the recent terrible massacres took place comes the alarming news of the outbreak and spread of different infectious diseases amongst the destitute victims. Information received from Erzerum and other provinces of Armenia gives a very sad picture of the present state of affairs, and according to the *Levant Herald*, with summer coming the problem in Adana is appalling. The refugees are for the most part gathered in camps outside the city, but there are 32 sections in the encampment, measles and other contagious diseases being strictly segregated. This arduous task has been accomplished by Commander Carver, H.M.S. *Swiftsure*, and the Rev. Stephen Van R. Trowbridge of Aintab. As rapidly as possible tents are being constructed and blankets and bedding distributed. Supplies are coming in slowly, however, and there are 20,000 people in the big camp. Fresh cases of wounds are brought in continually from the villages, most of them being in a state of hopeless gangrene. There is great and urgent need of more surgeons and nurses. Beirut, Aintab, Marash, and Smyrna have sent help to supply this need, but with so many to look after, unless a larger skilled staff is forthcoming, numbers are bound to perish from the physical impossibility of receiving attention from the present workers. Measles has proved as deadly as small-pox, for the children being in the open air and largely without bedding have contracted pneumonia and have died by the score. Almost all babies born since the massacres started are dead. Dysentery is rife throughout the camp. The central authorities in Constantinople, as well as the Armenian Committee and other charitable organisations, have sent money and medical help, but this does not seem sufficient to meet the urgent necessities of the case. Help is also coming from the United States.

The Sultan Visits the Wounded in the Hospitals.

The new Padishah has given another proof of his sympathetic care for his subjects. On May 24th he paid a visit to the extensive children's hospital of Shishli, where a large number of wounded officers and men are being treated. The Sultan was accompanied by the Commander-in-Chief, General Mahmoud Shevket Pasha, the liberator of the metropolis, and was received by the director of the hospital, Dr. Ibrahim Pasha, and the chief medical officer, Haireddin Bey. Six wounded officers were each presented with a gold watch by the Sultan, and 60 soldiers each with a silver one. He visited every section of the hospital and spoke kind words of praise and encouragement and eulogy to the wounded. The Sultan remained among the wounded for about an hour. He visited also other hospitals and was everywhere cheered enthusiastically by crowds of patriotic people.

The Municipal Health Service.

The following salaries have been fixed for the medical officers of the municipal service: 3000 piastres per month (£1 equals 120 piastres) for the chief of the sanitary staff; 2000 for the next in rank; 2000 for the director of the service of disinfection, and 2000 for each chemist and bacteriologist. The minor officers will receive 500 piastres. The General Council of the municipality of the city has decided to contract a loan of 1,000,000 Turkish liras to be used for the embellishment of the metropolis.

May 28th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Plague.

THE plague returns for the week ending April 24th show 4007 deaths, compared with 4594 in the week preceding. Bombay Presidency reports 762, Bengal 215, the United Provinces 501, the Punjab 2165, Burma 99, the Central Provinces 58, and Rajputana 177.

Cholera at Ujjain.

The city of Ujjain and the adjacent *méla* camps have been centres of cholera in epidemic form recently, from 10 to 15 cases having been registered daily. The mortality during the weeks ending April 24th has, however, been steadily on the decrease, and there have been no further attacks since then. It may therefore be hoped that the disease is practically stamped out. This is due to the energy displayed by Captain Koksingh Subha Sahib of Malwa, who deserves special praise, with the hearty coöperation of the medical staff and police, the latter ably controlled by Mr. Phatak, the district medical officer.

Tuberculous Disease in Calcutta.

The *Indian Medical Gazette*, summing up a series of papers read at the Medical Section of the Asiatic Society of Bengal, arrives at some very remarkable conclusions with reference to the prevalence of tuberculous disease in Calcutta. Lieutenant-Colonel G. F. A. Harris, I.M.S., reports that one-tenth of all the cases admitted to the General Hospital during the two years of his residence had been tuberculous. Major Leonard Rogers, I.M.S., in an analysis of post-mortem records, proves that 25 per cent. of all the bodies examined show traces of tuberculous disease, while in 17 per cent. it is the actual cause of death. Colonel H. W. Pilgrim, I.M.S., also bears testimony to the extremely common occurrence of tuberculous lesions, and considers that the origin and spread of the disease are largely due to preventable causes. Thus tubercle is a greater danger to life in this part of India than any of the purely tropical diseases. There is also practical unanimity among the medical profession in India that properly equipped sanatoriums furnish the only efficient means of treatment, but there is a good deal of difference of opinion regarding the most suitable site. The civil surgeon of Darjeeling reports against that station: living is too dear, and phthisis is very prevalent amongst the resident population, who are much over-crowded during the season. He thinks Kalimpong would be more suitable. The civil surgeon of Hazaribagh and the Rev. Dr. J. G. F. Hearn, a medical missionary there, give that place a qualified recommendation. The station, however, is difficult of access, and Indians find the cold nights in December and January very trying. Dr. Hearn suggests Puri. No explanation is offered of the fact that while Europeans and Hindus suffer in an equal degree, the liability is decidedly the greatest amongst the Mahomedans.

New Small-pox Hospital for Simla.

The new small-pox hospital for native patients, on the spur below the Mahomedan cemetery at Boileaugunge, is nearly completed, and it might be well for the municipality to consider whether a hospital of this kind should not be devoted to infectious cases generally and not be reserved merely for one specific disease. Small-pox appears in Simla spasmodically and at irregular intervals, and when it is non-existent the hospital lies empty and useless. It must be admitted that cases of small-pox and other infectious diseases cannot very well be treated in the same building, but this difficulty might be overcome by the erection in the vicinity of the new hospital of corrugated iron huts which are easily disinfected. These would accommodate small-pox patients, leaving the main building for infectious cases generally. The old hospital close to the Church of England cemetery will shortly be demolished, and an unpleasant feature will thus be removed from what should be an open locality. The dismantling of the building should be carried out during the rains, when the danger from dust-infection can be practically eliminated. There is happily no chance just at present of an epidemic of small-pox in Simla. It was feared that, with the move of the Government offices from Calcutta, infection might be carried into the summer capital, but only three cases have been detected during April. Every precaution was taken by the municipal committee, and the inspection of railway passengers at Tara Devi station is still a very close one. There are, of course, a number of persons who come by road, but these are mostly from the Punjab, in which province the only epidemic disease at present is plague. The bazaar population of Simla is closely watched over by the medical officers of health, and any outbreak of small-pox would be at once known. Visitors therefore need not be under any apprehension that the disease is likely to be prevalent there this summer.

May 8th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Vital Statistics.

THE estimated population of New South Wales at the end of 1908 was 1,605,000. This shows an increase of 31,785 during the year, and of these 26,345 were due to an excess of births over deaths during the period. The number of marriages was 12,642, equal to 7·96 per 1000, which is the highest rate for 21 years. The births totalled 42,525, equal to 26·77 per 1000 of population, and were in the proportion of 104 males to 100 females. 2932 illegitimate births were registered, equal to a rate of 69 per 1000 births. The deaths numbered 16,090, equal to 10·13 per 1000, which is 7 per cent. below the mean of the last ten years. The infant mortality figure works out at 76 per 1000 births for the whole State.

Socialistic Ideas.

At the annual conference of the Victorian Political Labour Council the following resolutions were agreed to:—

That a State system of free medical aid be established under which all women may have the right to obtain medical attention at, and two months prior and subsequent to, periods of maternity.

That the State Government provide meals (breakfast and dinner) for all children attending the State schools.

That the State should control and administer charitable institutions, such as hospitals and asylums.

Resolutions of this description may not have much immediate practical importance, but they show the trend of opinion amongst the advanced Labour party on matters that will one day affect the medical profession throughout Australia.

Melbourne Dust.

The reputation of Melbourne for dust is well maintained by the disinclination of the city council to approach the problem in a systematic manner. Mr. Hunt, the Commonwealth meteorologist, has made some observations with Dr. Aitken's "dust counter." The highest count in the city was 773,000 particles per cubic centimetre of air. Dust was much more prevalent in the early morning than at any other period of the day, a fact probably accounted for by the absence of water-carts and the early street cleaning operations. The suburban air was found to be ten times purer than that of the city at a distance of some four miles from the centre.

Meat and Milk Supervision.

Professor Gilruth, who has just been appointed to the new chair of Veterinary Science in the University of Melbourne, has been interviewed on the methods of handling meat and milk. He is of opinion that Victoria is ahead of New Zealand in milk supervision, and approves of this duty being in the hands of the Department of Agriculture. He does not favour the pasteurisation of milk, which reduces its digestibility and food value. In New Zealand the supervision of meat is done by the Agricultural Department, which he considers preferable to the Victorian system, the latter being in the hands of the Board of Public Health. In New Zealand all towns of 2000 inhabitants are compelled to erect public abattoirs.

Plague in Australia.

The reappearance of plague in Sydney is causing grave anxiety to the public health officials. Dr. J. Ashburton Thompson, the President of the Board of Health, has addressed through the daily press an earnest appeal to householders and city firms to assist the Board in providing and maintaining rat-proof defences for all dwellings and places of business. The plague-infected area continues slowly but surely to extend, though the Darling harbour frontage appears still to be the centre from which infection spreads. Since March 7th 17 cases have been reported, of which five were fatal. Three cases of plague have occurred in Adelaide, two of which were fatal.

Health Officers.

The Victorian branch of the British Medical Association has lately been considering the unsatisfactory position of municipal sanitation, particularly in country towns. The position of health officer to country municipalities is in few instances more than a nominal appointment. The health officer is offered a few pounds per annum and is expected to do as little as possible except when specially requested. The majority of medical men holding such positions feel that it is impossible to carry out the duties adequately, and an agitation for the appointment of whole-time health officers has been initiated by the Ballarat division of the association. After a good deal of discussion it has been resolved to request the Government to appoint six extra assistant medical officers to the Board of Public Health, who would devote their whole time to the office and be allotted to country districts in which they could assist the local health officers in carrying out the requisite supervision.

Queensland Public Health.

Dr. B. Burnett Ham has issued a report dealing with public health matters in Queensland for the year ending December, 1908. The birth-rate was 26·87 per 1000 and the death-rate 10·35. Infant mortality rate was 77·2 per 1000 births, diarrhœa being disastrously responsible for deaths among infants. Plague reappeared for the ninth year in succession, the total number of cases between July, 1907, and December, 1908, being 31, of whom two died. The corrected death-rate from plague for white population was 61·5 per cent. On June 30th, 1908, 65 persons (of whom 16 were whites) remained under detention for leprosy. A number of experiments were conducted with anti-plague serum from the Lister Institute. Guinea-pigs were inoculated with virulent plague bacilli and injected either before, simultaneously, or after with varying quantities (4 to 20 cubic centimetres) of serum. The serum was shown to possess very decided protective and even curative properties.

Personal.

Dr. R. J. Bull, the director of the bacteriological laboratory of the Melbourne University, has left for a holiday trip to Europe in the P. and O. steamer *Marmora*. By the same steamer Dr. T. Garnet Leary also set out on a visit to the old country, and prior to his departure was the recipient of a presentation from the residents of Sandringham, a suburb in which he has practised for some years.

New Melbourne Hospital.

At the last committee meeting of the Melbourne Hospital the question was raised as to whether the new building should be planned to provide for 300 or 400 beds. The estimated cost of a building to allow for 400 beds was £154,000. The chairman and others feared, not the constructional outlay, but the added maintenance, as it has been very difficult to make ends meet with the present number of beds, which is barely 300. The medical staff strongly urge the increased accommodation.

April 27th.

Obituary.

WILLIAM W. IRELAND, M.D. EDIN.

THE late Dr. W. W. Ireland, whose death occurred rather suddenly at Musselburgh on May 17th, was born in Edinburgh in 1832 and was educated at the High School and University there, graduating as M.D. in 1855. He was a lineal descendant of John Knox through Mrs. Welsh, the great Reformer's daughter. Having studied in Paris and served as resident surgeon at Dumfries Infirmary he became surgeon in the Bengal Horse Artillery and shortly afterwards was sent to the Siege of Delhi, which formed one of the major operations in the Mutiny. During the siege he saw Lord Roberts (then Lieutenant) wounded and attended him on that occasion, while he himself after seven months of being almost continuously under fire was severely wounded, losing an eye. The bullet passed from the left orbit under the base of the skull, while he was further wounded in the shoulder. After a couple of years' stay in the hills, during which time he was compiling material for his "Siege of Delhi," the severity of his wounds compelled him to retire from active service with a grant of a special pension. A further period of convalescence spent on the continent after leaving India was utilised in writing "Studies of a Wandering Observer" and a novel "Randolph Methyl," a story of Anglo-Indian life.

Having by this time become attracted to the mental department of medicine, Dr. Ireland on his return home was appointed medical superintendent of the Scottish National Institute for Imbeciles at Larbert, where he remained for ten years, and the outcome of his work there was the classic

"Ireland on Idiocy and Imbecility," which soon became the standard work on the subject, and which was afterwards expanded into "The Mental Affections of Children." By this time his devotion to the study of medico-psychological subjects had become fully established, his practical knowledge of French, German, Italian, Spanish, Norse, and Hindustani serving in good stead in translating matter for epitomes and reviews of current literature on mental subjects.

In 1880 Dr. Ireland started a private home for the treatment of cases of arrested mental development, first at Stirling and later at Prestonpans and Polton; he conducted these institutions with much success for a number of years. His last years were spent in nominal retirement at Musselburgh, but he still continued an active worker on the literary staff of the *Journal of Mental Science* and was a frequent contributor to THE LANCET and other medical papers and to the more thoughtful section of the general press. Dr. Ireland's most original work was the application of medico-psychological knowledge and studies in heredity to the explanation of the lives and conduct of many great men, and he has illustrated his theories in the case of Swedenborg, Caligula, Nero, and the Russian and other rulers in his "Blot on the Brain" and "Through the Ivory Gate." This important department of history and biography had been much neglected by historians, though it has since received some attention. Dr. Ireland was an ardent student of history, particularly of the times of the Commonwealth, as is illustrated in his "Life of Sir Henry Vane." In 1905 Dr. Ireland was the recipient of an illuminated address and other marks of appreciation, the function taking place in the hall of the Royal College of Physicians in Edinburgh, the President being in the chair, while Dr. T. S. Clouston in an appropriate speech made the presentation.

Dr. Ireland was a man of striking individuality. Tall, erect, of fine physical proportions, well-shaped head, and calm and kindly visage, his appearance commanded attention, and as a figure at the meetings of the various societies where he often spoke his personality will not soon be forgotten. He was an independent thinker on all the subjects he took up and was not easily moved when he had formed his conclusions, and was sceptical as to new views when not backed by what he considered proper proof. Without exaggeration one might say that his knowledge was encyclopædic, while his industry was immense. He was kindly and humorous, and few of his friends will forget his merry laugh, while it was his delight to help those of his brethren requiring literary aid. A list of Dr. Ireland's works forms quite a catalogue. He was a member of various societies in his specialty of mental disease and corresponding member of various foreign societies, and he also took an interest in local and political matters, being chairman of the Prestonpans branch of the Unionist Association for some years. Dr. Ireland is survived by his elder son, Dr. Thomas Ireland, recently retired from the West Indian Medical Service, and a daughter.

CHARLOTTE LOUISA ELLABY, M.D. PARIS, L.S.A.

Dr. Charlotte Louisa Ellaby, who died on May 14th at her house in Harley-street at the age of 55 years, was the youngest daughter of the late Rev. J. W. Ellaby of Woodstone, Peterborough. She graduated in medicine in Paris in 1884, embodying in her thesis the fruits of research work in ophthalmology undertaken while she was a student. In the autumn of that year, on the recommendation of Mrs. Garrett Anderson, M.D., she went out to Bombay to join Dr. Edith Pechey, first as physician at a temporary hospital and afterwards as second physician to the Cama Hospital, a Government hospital for women and children. Here Miss Ellaby worked most successfully, not only in the special eye department which she inaugurated, but also in a very large out-patient department and an increasing private practice. After some years' work in India, desiring to devote herself entirely to ophthalmology, she resigned her appointments and returned to England. She then passed the examination of the Society of Apothecaries (which had recently been reopened to women) in order to have a registrable British qualification.

In 1890 Miss Ellaby was invited by the committee of the New Hospital for Women to organise an eye department in connexion with the hospital, and was appointed its first ophthalmic surgeon. Here she worked happily and successfully until failing health, fought with the utmost courage, compelled her resignation three years ago. In the winter of 1894-95 Miss Ellaby returned to India for a few weeks, her services having been specially requisitioned to perform a double cataract operation upon the Rani of Jamnagar. The operations were successful, but it was partly to this visit to India that Miss Ellaby attributed her subsequent ill-health. At the time of her death she was consulting ophthalmic surgeon to the New Hospital for Women, lecturer on ophthalmic surgery to the London School of Medicine for Women, and was also a Member of the Faculty of Medicine of the University of London. Miss Ellaby had the true scientific spirit, although her literary contributions to scientific journals were few; they included papers on "L'Action de la Strychnine et du Courant Constant sur l'Œil Normal," and on a series of cases of Retinitis observed in the wards of the New Hospital and elsewhere.

CHARLES MARSHALL KEMPE, M.R.C.S. ENG., L.S.A.

THE death occurred at Shoreham, Sussex, on May 23rd of Mr. Charles Marshall Kempe, who in the summer of last year retired from practice and the position, among many others, of medical officer of health for the urban district of Shoreham, an office which he had held for no fewer than 35 years. Educated for the medical profession, Mr. Kempe took the diplomas of M.R.C.S. in 1861 and L.S.A. two years later. He came from Cornwall to Sussex, and settling at Shoreham was appointed to a number of posts, for besides the medical officership already mentioned he held appointments in connexion with the Poor-law, the railway, and the port of Shoreham. In addition he had an extensive private practice, so that his record of professional service was a considerable one. It was a wrench to him to give up the many positions he had held so long, but, unfortunately, he had not of late enjoyed the best of health. The urban council and the local court of Foresters placed on record in illuminated addresses their testimony of the manner in which Mr. Kempe had always discharged his duties, and it was extremely gratifying to him to know that in April last the ratepayers of Shoreham elected him to a seat on the urban council, the body which he had so faithfully served as medical officer. He was a prominent Freemason, a past master of the local lodge, and founder of another lodge; while at the time of his death he was chairman of the board of managers of the Shoreham council school. He was the author of "The General Practitioner's Visiting List, Journal, Almanack, and Memorandum Book." Mr. Kempe was 69 years of age. His body was interred in Shoreham cemetery on May 26th.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Theodor Wilhelm Engelmann, who had only recently retired from the chair of physiology. He was born at Leipsic in 1843 and studied in Jena, Leipsic, Heidelberg, and Göttingen. He then went to Utrecht as assistant to Professor Donders, whom he succeeded in 1889 as professor of physiology, remaining in that post until 1897, when he succeeded to Professor du Bois-Reymond's chair in Berlin. He has edited the *Archiv für Physiologie* for the last ten years. His own original papers include a great variety of subjects—e.g., the Origin of Muscular Force, the Colouring of Plants, the Structure of the Cornea, the Action of Light on the Retina, and the Physiology of the Heart.—Dr. Ferdinand Kornfeld of Vienna, whose name is well known in connexion with researches on the urinary organs.—Dr. Yêvetski, professor of ophthalmology in the University of Yurieff (Dorpat).

LITERARY INTELLIGENCE.—Messrs. J. and A. Churchill will shortly publish the following works. A new edition of "Minor Surgery and Bandaging," revised by Mr. Bilton Pollard, surgeon to University College Hospital. The first edition of this work, by Mr. Christopher Heath, was issued 48 years ago. The present (fourteenth) edition has been enlarged by nearly 100 pages and contains many new figures and a frontispiece of a surgeon in aseptic operating costume. "An Atlas of Dental Extractions, with Notes on the Causes and Relief of Dental Pain," by Mr. C. E. Wallis, assistant dental surgeon, King's College Hospital. The text will be supplemented with a series of illustrative plates.

Medical News.

UNIVERSITY OF CAMBRIDGE.—The following degrees were conferred on May 27th:—

M.D.—R. E. French, King's; J. C. L. Roberts, Clare; and F. W. M. Palmer, Jesus.
M.B., B.C.—F. C. Trapnell, King's; and J. W. B. Bean, H. Selwyn.
M.B.—N. Maclaren, Trinity; F. Worthington, St. John's; G. H. Davy, Gonville and Caius.

UNIVERSITY OF LONDON.—At examinations held in May for the M.B., B.S. degree the following candidates were successful:—

Honours.—‡Albert Harold Godwin Burton, Guy's Hospital; *Reginald Robert Elworthy, Westminster Hospital; §Augustin Pownall Fry, St. Bartholomew's Hospital; §Manchersha D. D. Gilder, University College Hospital; *†‡§Cecil Augustus Joll, B.Sc. (University Medal), University College, Bristol; and *Dan Arthur Powell, Charing Cross Hospital.

Pass.—Leonard Tilsley Baker, Guy's Hospital; Stanley James Annear Beale, London Hospital; Trevor Laurence Bomford, Robert Henry Bott, and Karl Bremer, St. Bartholomew's Hospital; Charles Herbert Broomhead and John Philip Buckley, Victoria University of Manchester; Elsie Mary Chubb, London (Royal Free Hospital) School of Medicine for Women; Lawrence Croft and Sydney John Darke, Guy's Hospital; Harry Cecil R. Darling and Trevor Berwyn Davies, University College Hospital; Newton Charles Davis, St. Bartholomew's Hospital; Gopal Vinayak Deshmukh, London Hospital; Irene Cecil Davy Eaton, London (Royal Free Hospital) School of Medicine for Women; Albert Edward Evans, University College Hospital; Thomas Evans, Guy's Hospital; Claude Howard S. Frankau, St. George's Hospital; William Lionel Evelyn Fretz, University College Hospital; Janet Marcia Fishe, London (Royal Free Hospital) School of Medicine for Women; Harold Sydney Furness, University College Hospital; Colin James Galbraith, King's College Hospital; Horace Gooch, London Hospital; Alexander Edward Gow, St. Bartholomew's Hospital; Frederick Whewell Hogarth, Guy's Hospital; Edward Ratcliffe Holborow, University College, Bristol; Maurice James Holgate and Alan William Holthusen, St. Bartholomew's Hospital; Harold Francis Lewis Hugo, Charing Cross Hospital; Matilda Hunt, London (Royal Free Hospital) School of Medicine for Women; John Lawrence Johnston, Guy's Hospital; Evan John Goronwy Jones, Roger Percival Jones, and William Britain Jones, University College Hospital; James Douglas Judson, Victoria University of Manchester; Herbert Cubitt Lucey, Guy's Hospital; Graham Rigby Lynn, St. Bartholomew's Hospital; John Christopher Lyth, University of Leeds; Howard Edward Hall Mitchell, Guy's Hospital; M. Herschel E. R. Montesole, St. Thomas's Hospital; Henry Lewis Morgan, London Hospital; William Poole Henley Munden, Guy's Hospital; Walter Henry Palmer, London Hospital; Owen Brynog Parry, St. Mary's Hospital; Jean René Perdrau, Guy's Hospital; Ellen Mary Pickard and Laura Gertrude Powell, London (Royal Free Hospital) School of Medicine for Women; Thomas Edwin Pryce, University College Hospital; William Percy Purdom and Roger Aiken Rankine, Guy's Hospital; Hubert Alan Hirst Robson, St. Thomas's Hospital; John Edward Scudamore, London Hospital; Florence Stacey, London (Royal Free Hospital) School of Medicine for Women; Marion Stocks, Victoria University of Manchester; St. John Alexander M. Tolhurst, Guy's Hospital; Sydney Arthur Tucker, St. Bartholomew's Hospital; James Owen David Wade, Charing Cross Hospital; Herbert George Willis, St. Mary's Hospital; and Charles Albert Wood, Guy's Hospital.

* Distinguished in Medicine. † Distinguished in Pathology.
‡ Distinguished in Forensic Medicine and Hygiene.
§ Distinguished in Surgery.

The following candidates have passed in one of the two groups of subjects:—

Group I.—Edward William Archer, B.Sc., St. Mary's Hospital; Ella Mabel Barker, London (Royal Free Hospital) School of Medicine for Women; Arthur Burrows, London Hospital; Donald Frederick Dobson, University of Leeds; Theodore Stewart Lukis, St. Bartholomew's Hospital; William Norman Pickles, University of Leeds; Gravenor Robert Strong, Westminster Hospital; Benjamin Randall Vickers, University of Leeds; Gordon Reginald Ward, Westminster Hospital; and Hugo Owen Williams, St. Bartholomew's Hospital.

Group II.—Anne Borrow, London (Royal Free Hospital) School of Medicine for Women; William Francis Bowen, University College Hospital; Cyril George Galpin, William Stanley Hughes, and John Edward Lionel Johnston, St. Mary's Hospital; Dermot Loughlin, London Hospital; Peter Donald F. Magowan, Guy's Hospital; John Harry Meers, St. Mary's Hospital; Douglas George S. Rice Oxley and Arthur Henry Penistan, London Hospital; Norman Guy Hawtrey Salmon, Charing Cross Hospital; Francis Charles Searle and Reginald Rutherford Smith, St. Bartholomew's Hospital; William Reginald Margetts Turtle, London Hospital; Arthur Leonard Weakley, St. Bartholomew's Hospital; Henry Owen West, King's College Hospital; and Richard Tudor Williams, St. Bartholomew's Hospital.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. Georg Nicolai, *privat-docent* of Physiology, has been granted the title of Professor.—*Bonn:* Dr. Paul Krause of Jena has been appointed Extraordinary Professor of Medicine.—*Caen:* Dr. Osmont has been appointed to the chair of Extraordinary Pathology and Operative Medicine.—*Clausenburg:* Dr. Nikolaus Janescó has been appointed Extraordinary Professor of Clinical Diagnosis.—*Haile:* Dr. Rudolf Disselhorst, Director of the Anatomical and Physiological Institute, who has hitherto only held the position of Extraordinary Professor, has been promoted to a full Professorship.—*Marburg:* Dr. Paul Sittler has been recognised as *privat-docent* of Children's Diseases.—*Munich:* Dr. A. Hasselwander has been recognised as *privat-docent* of Anatomy.—*Münster:* This University, which has hitherto only possessed a partial medical school, is now about to be provided with a complete medical faculty.—*Toulouse:* Dr. Soulié, *agrégé*, has been appointed Assistant Professor of Topographical Anatomy; Dr. Rispal, *agrégé*, Assistant Professor of Bacteriology, and Dr. Suis, Assistant Professor of Medical Zoology and Micrography.—*Vienna:* Dr. Karl Schwartz has been recognised as *privat-docent* of Physiology.—*Würzburg:* Dr. Hotz, Assistant in the Surgical Clinic, has been recognised as *privat-docent* of Surgery.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A general meeting of this society will be held at 5.15 P.M. on Friday, June 11th, at 20, Hanover-square, W., at which the officers and council will be elected for the ensuing session, the annual report of the council will be received, and the proposed amalgamation of the society with the Royal Society of Medicine, recommended by the council, will be discussed. An address will be delivered subsequently by Sir James Barr on the Peripheral Circulation and its Treatment. At 7.30 o'clock on the same evening the annual dinner of the society will take place at the Georgian and Adams Rooms, Piccadilly Restaurant, when the President, Mr. Ernest Solly of Harrogate, will take the chair. The President has arranged for an entertainment, at which the Misses Ridley, classical dancers; Mr. Byrd Page, prestidigitateur; and Miss Edith Wesley, contralto, will appear. The price of the dinner ticket is 7*s.* 6*d.*, exclusive of wine.

DONATIONS AND BEQUESTS.—Under the will of the late Mr. J. A. D. Shipley of Gateshead the following bequests amongst others are made:—£2000 to the Royal Infirmary for the Sick and Lame Poor of Newcastle-upon-Tyne, Northumberland, and Durham; £1000 to the University of Durham College of Science, Newcastle-upon-Tyne; £300 to the Fleming Memorial Hospital for Sick Children, Newcastle; £300 to the Hospital for Sick Children, Gateshead; £300 to the Northern Counties Blind Asylum, Newcastle; £250 to the Newcastle-upon-Tyne Dispensary; £250 to the Gateshead Dispensary; £250 to the Prudhoe Convalescent Home, Whitley; £200 to the Eye Infirmary, St. Mary's-place, Newcastle; £200 to the Northern Counties Institute for the Deaf and Dumb, Newcastle-upon-Tyne; £200 to the Throat and Ear Hospital, Saville-row, Newcastle; £200 to the Hospital for Diseases of the Throat and Ear, Clayton-street, Newcastle. The residue of the testator's estate will eventually be divided amongst these institutions, each of which will receive bequests equal to a sum about 12 times the amount stated above.—By the will of the late Mr. A. E. Birch of Clifton, Bristol, the Church Missionary Society (Medical Auxiliary) will receive a specific bequest of £2000 and subsequently an additional sum of about £12,000.

DURHAM UNIVERSITY MEDICAL GRADUATES' ASSOCIATION.—The annual meeting of this association was held on May 28th at 11, Chandos-street, London, W., Mr. H. Brunton Angus being in the chair. The treasurer's report was agreed to after some criticism. The following officers were then elected: Dr. W. Rawes, President; Dr. T. Beattie and Dr. M. G. Biggs, Vice-Presidents; Dr. W. Martin and Dr. J. Inglis Parsons, honorary secretaries; and 18 members of council and three auditors. Dr. Rawes, Dr. Martin, and Dr. T. M. Allison were elected representative governors of the court of the Durham College of Medicine. The report of the subcommittee on the University Bill was approved. Sir T. Lauder Brunton and Dr. F. W. Mott were unanimously elected honorary members of the association. The members and their guests dined together the same evening at the Café Royal, Dr. Rawes, the new President, being in the chair. The toast of the "University of Durham" was proposed by Mr. H. Brunton Angus and responded to by Sir George Hare Philipson; that of "The Association" was proposed by Dr. Mott and responded to by Dr. Parsons. The toast of "The Guests" was proposed by Dr. F. M. Sandwith and responded to by Sir James Barr in humorous terms. Among those

present were Sir Henry Burdett, Dr. C. A. Mercier, the Master of the Society of Apothecaries, Sir W. H. Allchin, Mr. T. H. Openshaw, Dr. C. W. Chapman, Dr. F. S. Palmer, and others. Some excellent music was provided by Mr. A. E. Godfrey and a most enjoyable evening was passed.

WORTHING HOSPITAL.—In accordance with the decision of the committee of management of the Worthing Hospital on May 14th to increase the honorary medical staff, the committee on May 28th elected the following gentlemen: Mr. H. F. Hyde, Dr. H. Leeds Harrison, Mr. E. H. Good, and Mr. P. J. Le Riche.

THE WEST AFRICAN MEDICAL STAFF.—The summer dinner of the West African Medical Staff will take place on Monday, June 21st, at the New Gaiety Restaurant, London. Members of the staff who intend to be present should communicate without delay with Dr. W. T. Prout, C.M.G., 78, Rodney-street, Liverpool.

MEDICAL SICKNESS, ANNUITY, AND LIFE ASSURANCE FRIENDLY SOCIETY.—The annual general meeting of the members of this society was held in the rooms of the Medical Society of London on May 27th. The report for 1908 shows the society to be in a thoroughly sound condition. At the end of the year the total membership amounted to 2723, being an increase of 140 over that of the previous year. The funds amount to £223,994 after the disbursement of £14,447 in sickness benefit during the year. The present annual income from sick insurance premiums is £17,010. Since the society was founded in 1884 over £140,000 have been paid out in sickness benefit to members. As the recent quinquennial valuation shows a surplus of £9040 in the sickness fund, all members entitled to its benefits receive at the age of 65 a 10-guinea bonus for every guinea per week of sick benefits to which they have become entitled during their membership with a proportionate sum to those who have increased their sick benefit amounts. As a surplus of £4303 exists on the life assurance branch a bonus of 15 per cent. on the sum assured is to be added to all payments made in response to claims on life assurance contracts falling due during the present quinquennium. In pursuance of this policy of the society £13,000 have already been paid out as bonus money. The society is open to all male members of the medical profession or Licentiates in Dental Surgery practising in the United Kingdom. The chairman of the executive committee is Dr. F. de Havilland Hall and the secretary of the society is Mr. F. Adiscott, F.I.A., 33, Chancery-lane, W.C.

LIVINGSTONE COLLEGE.—Commemoration Day was celebrated at Livingstone College, Leyton, on May 26th, in the presence of a large gathering, under the presidency of the Very Rev. Dr. Butler, Master of Trinity College, Cambridge. The Principal, Dr. C. F. Harford, in his opening statement, commented on the great progress which had taken place since Professor A. Macalister gave the inaugural address in the first premises of Livingstone College 15 years ago. Public opinion had entirely changed as to the necessity of medical training for missionaries, and it was now regarded as an absolute necessity for missionaries to have some medical knowledge. The Master of Trinity referred to the loss of Bishop Mackenzie, of his own sister, wife of the late Bishop Brown, and of other missionaries from fever, and said that the training given at Livingstone College would save many such valuable lives. Professor Macalister said that though doubts had been expressed as to the wisdom of the training given, he thought that these doubts had long since been laid aside, and as an old medical teacher he had thorough confidence in the course of training given at the College. From his experience in many parts of the world, especially in Syria and in China, he believed that it was a necessity for a missionary to be able to render simple medical aid to the natives, and in the absence of qualified medical aid it was most important that ordinary missionaries should have such elementary medical training as is given at Livingstone College. He hoped that before long some such training would be regarded as an absolute necessity for every missionary. Dr. M. A. Stein, the intrepid Central Asian explorer, bore testimony to the skill and kindness of an old student of Livingstone College, who had rendered him valuable surgical aid for frost-bite when travelling in the Himalayas. Mr. W. McAdam Eccles moved a hearty vote of thanks to the chairman and speakers. The meeting terminated with the Benediction, which was pronounced by the Master of Trinity.

BRIGHTON SCHOOL CANTEENS.—Some interesting figures were given in the annual report of the Brighton elementary schools canteen committee submitted to the education authority at its meeting on May 25th. The report dealt with 12 months from May 5th, 1908, to May 3rd, 1909, covering, as it did, the second year's working of the free meal distribution in the borough. It appeared that of 17,257 children on the books 1427 (or 8 per cent.) received free meals. In the year previous the number of children receiving free meals was 1213. The total number of free meals granted was 113,490, or an increase of 27,288 upon the previous year. This great increase was not explained when the report was presented to the education committee, but evidently the authority is quite satisfied inasmuch as it passed the report without comment and resolved "that, feeling satisfied that there are children in the elementary schools who are unable, by reason of lack of food, to take full advantage of the education provided for them, also that funds other than public funds are not available, the Brighton town council be requested to make application to the Board of Education under Section 3 of the Education (Provision of Meals) Act, 1906, for sanction for the spending of £500 from the rates during the financial year ending March 31st, 1910, for the purpose of defraying the cost of food furnished in meals under the Act." The cost to the rates for the provision of food was £427 3*s.* 2*d.*, and as £10 2*s.* 8*d.* had been received by the sale of 1*d.* dinners and surplus food the net cost to the rates for food was £417 0*s.* 6*d.* The gross cost of the canteens was £737 15*s.* 1*d.* and the net cost £727 12*s.* 5*d.*

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Whitsuntide Holidays.

BOTH Houses of Parliament have had an adjournment for the Whitsuntide holidays. The House of Lords will not meet again until June 23rd, but the Commons were only able to take a week's vacation. Parliament is to all appearance entering on a very strenuous period of the session. The Finance Bill, which has now been published, is a very long and complicated measure, bristling with points of controversy. The Opposition regards many of its proposals with undisguised hostility, and a long and keen Parliamentary fight may be expected in consequence. Many Members of the House of Commons were disappointed that in anticipation of the physical strain which may be put upon them in the next three months in sitting late the holidays were not longer.

The Tuberculosis Order.

A motion has been passed by the House of Commons for the presentation and publication of the Tuberculosis Order of 1909 and of a Circular Letter issued by the Board of Agriculture and Fisheries to local authorities in Great Britain under the Diseases of Animals Acts, 1894 to 1903. The Order in question has an important bearing on the milk legislation of the Government.

Experiments on Living Animals.

A return has been ordered showing the number of experiments on living animals during the year 1908 under licences granted under the Act 39 and 40 Vic., c. 77, distinguishing the nature of the experiments.

The Superannuation of Asylum Officers.

A considerable amount of evidence has been taken by the Select Committee of the House of Commons on the subject of the superannuation of asylum officers. Amongst the witnesses on May 26th was Dr. BOWER, Bedford, chairman of the Parliamentary Committee of the Medico-Psychological Association. He stated to the committee that in the absence of a guaranteed pension system the asylum service had not always the same inducements as other branches of the public service to offer in order to attract the best possible recruits. The Association cordially welcomed the principle of the Bill.

HOUSE OF COMMONS.

WEDNESDAY, MAY 26TH.

Malaria in the Colonies.

Mr. RAMSAY MACDONALD asked the Under Secretary of State for the Colonies whether the 11 colonies which made no special report on malaria, in response to the circular of June 6th, 1906, had since been communicated with and had been asked to furnish reports.—Colonel SEELY replied: Yes, sir. A special circular has recently been sent out by the Secretary of State with a view to obtaining fuller information with regard to anti-malarial measures, both from the colonies to which by honourable friend refers and from other tropical colonies.

Mr. RAMSAY MACDONALD further asked whether the Colonial Office had made any representation to the Government of St. Kitts-Nevis

drawing their attention to the fact that, according to Cd. 3992, p. 32, nothing had been done by them to destroy the breeding-places of malaria-carrying mosquitoes, although half the adult population were infected by them; and what had been the result of the representation.—Colonel SEELY answered: The Secretary of State has made no further representation to the Government of St. Kitts-Nevis in this matter. He fears that effective action in this direction may be hampered by financial considerations, but the officer administering the government will be asked for a report on the possibility of taking action.

Mr. RAMSAY MACDONALD also asked whether the Colonial Office had entered into correspondence with the Government of the Bahamas, in consequence of the opinion expressed by the Administrative and Executive Council of the Colony that rules, for the suppression of mosquito-borne diseases, including malaria fever and yellow fever, were *ultra vires*; and with what result.—Colonel SEELY replied: The incident to which my honourable friend refers took place in 1906, and there has been no recent correspondence on the subject. The Secretary of State will now call upon the Governor to furnish a report as to the measures taken in the Bahamas to combat tropical diseases. It has to be remembered that legislation and expenditure in this colony are dependent upon the consent of the House of Assembly, which is an elective body.

The Prevention of Disease in Gaelic-speaking Districts.

Mr. WEIR asked the Lord Advocate whether, in view of the statement contained on page 32 of the recently issued report of the medical officer for Ross and Cromarty, he would state whether the leaflets giving directions how to prevent and cope with the different infectious diseases, including consumption, would be printed in Gaelic as well as English; and when were the leaflets likely to be circulated to the Lewis townships.—Mr. URE answered: The county medical officer reports that the leaflets referred to, giving directions how to prevent and cope with different infectious diseases, will be translated into Gaelic and circulated through Ross-shire, including Lewis, as soon as possible, probably by the end of June.

The Infectious Diseases Hospital, Stornoway.

Mr. WEIR asked the Lord Advocate whether, seeing that the medical officer of health for Ross and Cromarty, in his recently issued report, again called attention to the fact that the infectious diseases hospital at Stornoway was in urgent need of a water-supply, and that the Lewis district committee declared their inability to take action owing to need of funds, the Government would consider the expediency of making a grant or advance to the committee such as would admit of water being laid on to this hospital, so that the patients might no longer suffer for want of water.—Mr. URE replied: There are no funds out of which a grant can be made for the purpose suggested by my honourable friend.

Mr. WEIR: In view of the urgency of the matter will the right honourable gentleman ask the Secretary for Scotland to approach the Chancellor of the Exchequer with a view to getting the necessary money out of the millions which he is raising?—Mr. URE: I shall make the effort, but I cannot hold out hope that it will be successful.

The President of Madras Medical College.

Mr. MOONEY (for Mr. KETTLE) asked the Under-Secretary of State for India whether the present president of the Medical College, Madras, was appointed to that post after having acted as surgeon on the personal staff of three successive governors of Madras; and what educational experience this gentleman possessed to qualify him for his present appointment.—Mr. HOBHOUSE (on behalf of Mr. BUCHANAN) replied: The present principal of the Medical College, Madras, was surgeon to the Governor of Madras from May, 1892, to February, 1902. He has also held various other appointments in the medical service, and was professor of medical jurisprudence and professor of surgery for two and a half years before he became principal. The appointment is one for which the authorities in India are responsible, and the Secretary of State sees no reason to question the propriety of their selection.

Enteric Fever amongst Soldiers.

Captain CLIVE asked the Secretary of State for War whether he was aware that several non-commissioned officers and private soldiers who had been found to be enteric germ carriers, having contracted enteric fever in India and elsewhere abroad, were confined as such, and had been for many months, in military hospitals; that various experiments had been tried on them by inoculation and other means so far, apparently, without result; and whether he could say under what section of the Army Act these soldiers were deprived for such long and indefinite periods of their liberty.—Mr. HALDANE said in reply: The question evidently refers to the seven non-commissioned officers and men under treatment at the Millbank Military Hospital. I am informed that the condition of these cases rendered them dangerous to their comrades in barracks. It was therefore decided, on the recommendation of the Army Medical Advisory Board, to place them under special treatment to see if their condition is curable. This treatment has met with encouraging results and one at least of the cases, it is hoped, has been cured. Although patients in hospital, they are allowed considerable freedom and are not treated as ordinary patients, but rather as convalescents.

Captain CLIVE: Can the right honourable gentleman say how long these men are likely to be confined against their will?

Mr. HALDANE: They will be free so soon as the danger of the bacilli which they brought to this country has been destroyed.

Captain CLIVE: Is this theory as to germ-carrying not quite unproved?

Mr. HALDANE: No, I do not think so. The advance in medical science on this subject within the last two years has been enormous.

Mr. JOHN WARD: Are these experiments being made with the sanction of the men; and in case of permanent injury to their health will the men be pensioned?

Mr. HALDANE: I do not know why the honourable member treats these as experiments. They are a well known ascertained cure.

The Medical Examination of Yeomanry Recruits.

Mr. METSEY-THOMPSON asked the Secretary of State for War whether he was aware that it was frequently the case that medical men were allowed only 1s. per head for every Yeomanry recruit who was passed, and that they received no payment for the examination of recruits who were not passed; and whether he would consider the advisability of amending this system, which offered a distinct inducement to medical men to pass recruits who on the outbreak of war might be found unfit for service.—Mr. HALDANE replied: The fees paid for the medical examination are at the discretion of the county associations. They are not limited to the 1s. rate when payment is made, nor are they precluded from paying for men examined but not passed.

Poor-law Statistics in Ireland.

Dr. AMBROSE asked the Chief Secretary to the Lord Lieutenant of Ireland what was the number of persons in receipt of indoor relief in Ireland during the year ending March 31st, 1909, exclusive of children and the sick; what was the number of children in the workhouses during the same period; what was the number of sick in union hospitals in the same period; what was the number of persons on outdoor relief during the same period, the number of able-bodied on indoor and outdoor relief, respectively, and the cost for each class; and what was the total cost of Poor-law expenditure in Ireland during the same period.—Mr. CHERRY (on behalf of Mr. BIRRELL) wrote in reply: It is not possible to state the number of separate individuals who received relief in Ireland during the year. The average daily number of persons in workhouses, exclusive of children in hospitals, was 22,644. The average daily number of children not in hospital in the same period was 5630, and the average number of sick in hospitals was 14,781. The number in receipt of outdoor relief was 59,036. The average daily number of able-bodied persons on indoor relief was 4848. Outdoor relief cannot be given to the able-bodied save to relieve exceptional distress, pursuant to the provisions of Section 2 of The Poor Relief (Ireland) Act, 1847, and Section 13 of The Local Government (Ireland) Act, 1898. The latter was in force in certain unions for a few months last year, but the Local Government Board has no information as to the number of able-bodied persons relieved by relief works. The cost of relieving each of the above classes and the total poor relief expenditure for the year cannot be stated, as the union accounts for the half year ended March 31st last have not yet been completed.

BOOKS, ETC., RECEIVED.

ASH (CLAUDIUS), SONS, AND CO., LIMITED, London.

Notes on Dental Anatomy. By G. A. Peake, M.R.C.S., L.D.S. Eng., L.R.C.P., L.S.A. Lond. Price not stated.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

The Medico-Chirurgical Series. No. 1. The Practice of Anæsthetics. By Rowland W. Collum, L.R.C.P. Lond., M.R.C.S. Eng. General Surgical Technique. By H. M. W. Gray, M.B., C.M. Aberd., F.R.C.S. Edin. Edited by James Cantlie, M.A., M.B., C.M. Aberd., F.R.C.S. Eng. Price 10*s.* net.

CREMATION SOCIETY OF ENGLAND, London.

Cremation in Great Britain. 1909. First Edition (10,000). Price 6*d.*

DULAU AND CO., London.

The Groundwork of Eugenics. By Karl Pearson, F.R.S. Price 1*s.*

GRIFFIN, CHARLES, AND COMPANY, LIMITED, London.

Diseases of the Organs of Respiration. By Samuel West, M.A., M.D., F.R.C.P. In Two Volumes. Second Edition, revised. Price 36*s.* net.

HEINEMANN, WILLIAM, London.

Sir Guy and Lady Rannard. By H. N. Dickinson. Price 6*s.*

HÖLDER, ALFRED, Wien und Leipzig.

Die Erkrankungen der Schilddrüse, Myxödem und Kretinismus. Von Dr. C. A. Ewald. Zweite, völlig neu bearbeitete Auflage. Price M.8.80.

KING, P. S., AND SON, London.

The Problem of the Feeble-Minded. An Abstract of the Report of the Royal Commission on the Care and Control of the Feeble-Minded. With an Introduction by the Right Hon. Sir Edward Fry, G.C.B. Price 1*s.* net.

LAURIE, T. WERNER, London.

The Education of the Will. A Popular Study. By T. Sharper Knowlson. Price 6*s.* net.

The Modern Mother. By H. Laing Gordon, M.D. Price 6*s.* net.

LEHMANN, J. F., München.

Fünfundzwanzig Jahre knappschaftsärztlicher Praxis beim Eschweiler Bergwerks-Verein (1884–1909). Von Dr. Jannes, in Eschweiler. Price M.2.

LEWIS, H. K., London.

House-Drainage, Sewerage, and Sewage Disposal in Relation to Health. By Louis C. Parkes, M.D., D.P.H. Price 2*s.* net.

LINDLEY, PERCY, London. (GREAT EASTERN RAILWAY COMPANY London.)

The Great Eastern Railway Company's Tourist-Guide to the Continent. (With Travel-talk in German, French, and English.) Edited by Percy Lindley. Illustrated, and with Maps. Price 6*d.*

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

The Mystery of Existence in the Light of an Optimistic Philosophy. By Charles Wicksteed Armstrong. Price 2*s.* 6*d.* net.

LONDON PUBLICITY COMPANY, LIMITED, London.

120 Years of Life and How to Attain Them. By Charles Reinhardt, M.D. (A Treatise upon the Use of Lactic Ferments for the Prevention and Cure of Disease and the Prolongation of Life). Price 1*s.*

MALOINE, Paris.

Une Campagne Criminelle. Avortement et Néomalthusianisme. Par J. Leroy-Allais. Price not stated.

MASSON ET CIE., Paris.

Traité de Chirurgie d'Urgence. Par Félix Lejars. Sixième édition, revue et augmentée. Price Fr.30.

McQUEEN, J., AND CO., Leicester.
McQueen's Private Account Book. Price 10s. 6d., post paid.

METHUEN AND CO., London.
Drugs and Drug Habit. By Harrington Sainsbury, M.D., F.R.C.P. Price 7s. 6d. net.

MITTLER, ERNST SIEGFRIED, UND SOHN, Berlin.
Medizinal-Berichte über die Deutschen Schutzgebiete. Deutsch-Ostafrika, Kamerun, Togo, Deutsch-Südwestafrika -Neu-Guinea, Karolinen, Marshall-Inseln und Samoa, für das Jahr 1907-08. Herausgegeben vom Reichs-Kolonialamt. Price M. 9.

MURRAY, JOHN, London.
The Recent Development of Physical Science. By William Cecil Dampier Whetham, M.A., F.R.S. Price 5s. net.

PITMAN, SIR ISAAC AND SONS, LIMITED, LONDON.
Body and Soul. An Enquiry into the Effects of Religion upon Health, with a Description of Christian Works of Healing from the New Testament to the Present Day. By Percy Dearmer, M.A. Price 6s. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BAGNALL, R. G. A., M.B., Ch.B. Edin., has been appointed Assistant Medical Officer at the Newcastle-on-Tyne City Asylum, Gosforth.

BALY, A. L., M.R.C.S., L.R.C.P. Lond., has been appointed First Assistant Medical Officer at the Lambeth Infirmary.

BIDIE, EVAN, L.R.C.P. & S.Edin., L.F.P.S. Glasg., has been appointed Assistant Medical Officer at Wye House Asylum, Buxton.

BYGOTT, ALBERT HENRY, M.D. Lond., D.P.H. Birm., Barrister-at-law, has been appointed Medical Officer of Health of Barking.

HAILES, C. D. G., M.D. Edin., F.R.C.S. Edin., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Bristol District of the county of Gloucester.

HALL, JOHN BASIL, M.B., B.C. Cantab., F.R.C.S. Edin., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 11, to be attached more particularly to Bradford, Keighley, Otley, and Skipton County Courts.

RISELEY, STANLEY, M.D. Edin., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuits Nos. 13 and 18.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BETHLEM HOSPITAL.—Two Resident House Physicians, unmarried, for six months. Salary at rate of £25 each per quarter, with apartments, board, and washing.

BIRMINGHAM GENERAL DISPENSARY.—Resident Surgeon, unmarried. Salary £170 per annum, with rooms, fire, lights, and attendance.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—Resident Medical Officer. Salary £150, with board and residence. Also House Surgeon for six months. Salary at rate of £75 per annum, with board and residence.

BOURNEMOUTH, ROYAL BOSCOMBE AND WEST HANTS HOSPITAL.—House Surgeon, for six months. Salary at rate of £80 per annum, with board, lodging, and washing.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—House Surgeon, unmarried. Salary £130 per annum, with board and residence.

BRITISH EAST AFRICA, CHURCH OF SCOTLAND MISSION, Kikuyu.—Medical Missionary.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—House Surgeon also Assistant House Surgeon, both unmarried. Salaries £80 and £60 per annum respectively, with board, lodging, and washing.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's Inn-road, W.C.—Assistant Surgeon.

CENTRAL LONDON SICK ASYLUM, Colindale Avenue, The Hyde, Hendon, N.W.—Assistant Medical Officer and Dispenser. Salary £110 per annum, with board and residence.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—Junior House Surgeon. Salary £60 per annum, with board, apartments, and laundry.

CHINA, CHURCH OF SCOTLAND MISSION, Ichang.—Medical Missionary.

DUDLEY, GUEST HOSPITAL.—Assistant House Surgeon. Salary £60 per annum, with residence, board, and washing.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—House Physician for eight months. Salary at rate of £60 per annum, with board, residence, and washing.

EXETER, ROYAL DEVON AND EXETER HOSPITAL.—Assistant House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

HAMPSHIRE COUNTY COUNCIL.—Assistant County Medical Officer of Health. Salary £250 per annum, and allowances.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Assistant Casualty Medical Officer, unmarried, for six months. Salary £30, with board and residence.

INDIAN MEDICAL SERVICE, India Office, London.—Twenty-one Commissions.

INVERNESS, NORTHERN INFIRMARY.—House Surgeon. Salary £100 per annum, with board, &c.

IPSWICH, EAST SUFFOLK HOSPITAL.—Senior House Surgeon. Salary £80 per annum.

KINCARDINE (ROSS-SHIRE) PARISH COUNCIL.—Resident Medical Officer and Vaccinator. Salary £105 per annum, with lunacy fees.

KING'S COLLEGE HOSPITAL.—Sambrooke Surgical Registrar.

KING'S COLLEGE HOSPITAL MEDICAL SCHOOL.—Professor of Psychological Medicine.

LEEDS GENERAL INFIRMARY.—Resident Surgical Officer; also Resident Casualty Officer. Salaries £150 and £125 per annum respectively, with board, lodging, and washing. Also Honorary Assistant Surgeon.

LINDSEY (LINCOLNSHIRE) EDUCATION COMMITTEE.—Two School Medical Inspectors. Salary £300 per annum.

LONDON HOSPITAL MEDICAL COLLEGE.—Assistant to the Bacteriologist and Lecturer on Bacteriology.

LONDON MEDICAL MISSION, Endell-street, W.C.—Medical Officer, unmarried. Salary £100 per annum, with board and lodging.

LONDON TEMPERANCE HOSPITAL.—Assistant House Surgeon, for six months. Salary at rate of £75 per annum.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—Junior Resident Medical Officer. Salary £50 per annum, with board and residence.

NORWICH, JENNY LIND INFIRMARY FOR CHILDREN, Unthank-road.—Resident Medical Officer (female). Salary £50 per annum, with board, apartments, and laundry.

NORFOLK COUNTY ASYLUM, Thorpe, Norwich.—Second Assistant Medical Officer, unmarried. Salary £160 per annum, with board, apartments, attendance, and laundry.

QUEENSLAND, AUSTRALIAN INSTITUTE OF TROPICAL MEDICINE, Townsville.—Director of the Institute.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—Lecturer on Physiology.

STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY AND EYE HOSPITAL, Hartshill.—Resident Surgical Officer, House Physician, and Junior House Surgeon. Salaries £120, £100, and £50 per annum respectively, with apartments, board, and washing.

WALSALL AND DISTRICT HOSPITAL.—House Surgeon, also Junior House Surgeon. Salary of former £100 and of latter £80 per annum, with board, residence, &c.

WEST BROMWICH DISTRICT HOSPITAL.—Resident Assistant House Surgeon, unmarried. Salary £75 per annum, with board, residence, and washing.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician, unmarried. Salary £65 per annum, with board, residence, &c.

WOLVERHAMPTON AND MIDLAND COUNTIES EYE INFIRMARY.—House Surgeon. Salary £80 per annum, with apartments, board, and laundry.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Two House Surgeons. Salary £80 per annum, with board, lodging, and laundry.

WORCESTER GENERAL INFIRMARY.—House Physician. Salary £100 per annum, with board, residence, and washing.

THE Chief Inspector of Factories, Home Office, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Lostwithiel, in the county of Cornwall; and at Cleland, in the county of Lanark.

Births, Marriages, and Deaths.

BIRTHS.

ALMOND.—On May 31st, at Lynvale, Bath, the wife of G. Hely-Hutchinson Almond, M.A., B.M., Ch.B. Oxon., M.R.C.S., L.R.C.P., of a son.

BALFOUR.—On May 29th, at Court Lodge, Deal, the wife of Andrew Balfour, M.D., of Khartoum, of a son.

EAST.—On May 28th, at 2, North-road, Clapham Park, S.W., the wife of William Norwood East, M.D. Lond., of a daughter.

STEWART.—On May 29th, at Dyffryn, Dulwich, the wife of H. M. Stewart, M.A., M.D., of a daughter.

TURNER.—On May 30th, at Westbury, Purley, Surrey, the wife of Sydney Duke Turner, M.D., B.S., D.P.H., of a son.

MARRIAGES.

GOOD—ANGUS.—On June 1st, at St. Mungo's Church, Balerno, Midlothian, Edgar Hubert Good, M.R.C.S., L.R.C.P., eldest son of the late Edward John Gregory Good, of Long Ditton, Surrey, to Alice Josephine, daughter of the late Joseph Angus, of Hampstead.

LYLE—PLAYFAIR.—On May 27th, at Christ Church, Mayfair, Herbert Willoughby Lyle, M.D., F.R.C.S., to Annie Seaton, widow of David Thomson Playfair, M.D., F.L.S., and daughter of Edwin William Winton of Speldhurst, Kent.

DEATHS.

CRIPPS.—On May 25th, at Thomas-street House, Cirencester, Edward Charles Cripps, M.R.C.S., L.R.C.P., aged 54 years.

HAMES.—On May 28th, George Henry Hames, F.R.C.S.

RAMSDEN.—On June 1st, after a long illness, Henry Kay Ramsden, M.B., B.Ch., aged 42 years, of 102, Sloane-street, Chelsea. Funeral at Saddleworth, Yorkshire, on June 6th.

SHEPHERD.—On May 28th, at Finchley, J. Brooks Shepherd, M.R.C.S., formerly of 8A, New Cavendish-street, in his 75th year.

SYMINGTON.—At 17, Strathearn-place, Edinburgh (the residence of Hippolyte Blanc, R.S.A.), on May 29th, Juliet, wife of Dr. Symington, Professor of Anatomy, Queen's College, Belfast, and daughter of the late William Bryce, architect.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

MENTAL DISEASES IN THE ORIENT.

Dr. Massar Bey, professor of neurology in Stamboul, has published recently an instructive study of mental disease. In an especially interesting chapter he deals with the differences in origin of insanity as manifested in the Orient and Western Europe respectively. It is generally accepted that mental diseases are of rarer occurrence in the East than in the West. Dr. Massar Bey gives the following reasons. Of the numerous poisons that undermine the bodily health and ruin the nervous system of Europeans many are quite unknown in the East, or known only in a very slight degree. This is the case, for instance, with lead poisoning resulting from industrial occupation, while morphine, cocaine, and atropine are hardly ever used by the Eastern. Oddly enough, it is very seldom that victims of the opium or hashish habits are found in asylums. Foremost consideration of all is the fact that the pernicious effects of alcoholism, which account for so many nervous and mental diseases in the West, are absolutely unknown in the East. The Oriental uses alcohol only in exceedingly rare cases. It is the religious duty of the follower of Islam never to touch alcoholic drinks, but the non-Mussulman population also are much more sober in Eastern countries than in Europe. Thus Jews and Armenians are hardly ever seen drunk. Ailments, therefore, resulting from the excessive use of alcoholic drinks are very seldom met with. Other causes of the rare occurrence of mental disability in the East are to be found in the modes and habits of living and in the ethical precepts of its peoples. The fatalistic trend of mind of an Oriental saves him from excessive worry and grief over the death of a beloved person or the loss of a valuable property. His religion helps him in a remarkable way. The acceptance of kismet is the guiding rule at every turn of life. Dr. Massar Bey says that Mahomedan children are taught in their early school days to learn entire submissiveness to the unavoidable decrees of kismet, and summarises this philosophy in somewhat remarkable words: "We aspire in our spiritual activity to an abiding and logical ideal. All our existence is due to but a mere chance. What we possess does not cause us the highest satisfaction and joy, because we think that it is not ours. Its loss therefore never puts us into a state of inconsolable mourning. We work in the hope of success, but if success does not follow we quietly consider that it is not our fault, that all lies in the hands of kismet." Another advantage on the side of many an Oriental is to be found in the simplicity and natural manner of his living. He has no exciting evening entertainments, no balls, no late hours of amusement. He despises excess of every sort and he looks for his happiness to his family life.

AN INVESTIGATION INTO THE INDUSTRIAL EMPLOYMENT OF MARRIED WOMEN.

To the Editor of THE LANCET.

SIR,—The investigation committee of the Women's Industrial Council is making an extensive inquiry into the industrial employment of married women—a subject upon which there is a great lack of detailed and classified information. As a rule, the inquiries of the council are confined to London, but it has been felt necessary to carry this one into other parts of the country, and the expenses will be correspondingly increased. Voluntary assistance has been, and is being, given, and 300 to 400 cases have already been collected and in part tabulated, but much remains to be done, and the funds of the council, never large, must be supplemented by further contributions from the general public. It is estimated that at least £500 will be necessary to carry out the inquiry in any adequate manner.

The collection and publication of a large body of facts concerning the employment of married women will be of especial value to the various health authorities of the country; it will probably throw light upon infant mortality and physical deterioration as well as upon many industrial and some social problems. Its value in all these directions, however, will depend largely upon the extent and fulness of the inquiry. The council, therefore, feels itself amply justified in appealing to the public for a generous measure of support; the rather that a body which has no party politics, no sectarian views, and no preconceived theory to establish cannot command the particular or partisan support of any special group. The council's aim is to learn and set forth facts, irrespective of the views which those facts may be found to confirm or to contradict; and we boldly ask for money to help in carrying out this useful work. Contributions should be sent to Miss L. Wyatt Papworth, secretary, Women's Industrial Council, at the office, 7, John-street, Adelphi, Strand.—We are, Sir, yours faithfully,

CLEMENTINA BLACK, Chairman } Investigation
H. D. PLAYER, Hon. Secretary } Committee.
May 21st, 1909. L. WYATT PAPWORTH, Secretary.

LYNN THOMAS AND SKYRME FUND.

THE following additional subscriptions to the above fund have been received: J. D. Williams (Cardiff), £1 1s.; S. J. C. Fraser (Hastings), and W. C. Griffiths (Pontardulais), £2 2s.

THE RELATIVE IMPORTANCE OF SODIUM AND CALCIUM IN THE CAUSATION OF GOUT AND GOUTY DEPOSITS.

IN the *Bio-Chemical Journal* for February, Dr. W. G. Little recorded some interesting experiments which he has made on the solubility of the various salts of uric acid at the temperature of the body in water and in saline solution. In distilled water potassium biurate is soluble 1 in 550, sodium biurate 1 in 1030, magnesium biurate 1 in 2440, and calcium biurate 1 in 4760. When the distilled water was replaced by ½ per cent. solution of sodium chloride it was found that while the solubilities of the biurates of calcium and magnesium were somewhat increased, that of sodium biurate was reduced almost to zero. This result, it is thought, probably gives the key to two phenomena: first, the preponderance of sodium biurate in the body in gouty concretions; and secondly, the value of certain saline mineral waters empirically used in gout, their value depending upon the increased solubility of the biurates of calcium and magnesium in saline solutions. Attention is specially directed to the relatively small amount of sodium chloride which produces such a considerable change in the solubilities, showing that small variations in the relative distribution of the salts in the blood plasma, such as might naturally occur in different individuals, may have profound effects on the solubilities of the biurates in the body. In the language of physical chemistry, the effect of sodium chloride upon the solubility of sodium biurate may probably be referred to the mass action of the common sodium ion tending to throw out of solution the less soluble salt—viz., sodium biurate. Dr. Little has also found that the addition of even small percentages of calcium salts to distilled water had the effect of very much lessening its solvent power on sodium biurate. The experiments tend to show that the formation of deposits and tophi may be largely influenced by the presence of calcium salts. Dr. Little records two cases met with in his practice which afford suggestive evidence that sodium chloride is connected with gouty joint phenomena. In one of the cases a child aged five years developed acute arthritic symptoms in the feet and thighs, simulating acute rheumatism, after an overdose of sodium chloride given in the form of an enema for intestinal worms. The pathogenic significance of the sodium chloride was proved by the fact that as soon as its administration ceased, with no other medication except small doses of potassium citrate, the child rapidly became and remained well. In the other case the enjoyment of a course of boiled ham was followed by podalgic gout, first in one great toe joint and then in the other. Analyses of the urine collected when the attack was at its height and again when recovery was well advanced suggest that in the acute stage sodium chloride has something to do with arthritic symptoms, and that an increase of calcium, magnesium, and potassium in the urine is at least compatible with recovery from an attack of gout, while the reverse is true for sodium.

AN ETHNOLOGICAL THEORY OF PARASITIC DISEASE.

To the Editor of THE LANCET.

SIR,—The April number of *Janus* contains an article to which I should like to call the attention of physicians and historians. The writer, Dr. Otto Effertz, a governmental vaccinator in Mexico, attempts to prove that the virulence of an infectious disease is not absolute but relative, being the resultant of two factors varying according to the country in which the disease is endemic and the people who are attacked by it. These factors are: (1) the virulence of the microbe, which differs in different countries; (2) the extent to which the patients have become immune through natural selection. In other words, the microbes, as the result of their struggle with men, gradually increase in strength; natural selection evolves more powerful micro-organisms. On the other hand, a race of men is evolved more capable of resisting them. The resultant represents the malignity of the disease, and it will vary as the factors vary. Dr. Effertz then notices two remarkable facts: (1) African malaria is deadly for Europeans, but very mild for Africans; (2) American malaria is deadly for American Indians, but mild for Europeans. He infers (*a*) that the African parasite has grown more virulent during the thousands of years it has been in Africa; (*b*) that the American parasite is much less virulent, having been recently carried to America. The African negro has won his battle; the European has partly won it; the American Indian has yet to win it. The European is superior to the American parasite, but inferior to the African parasite. The Indian is inferior, the African negro superior to both.

Dr. Effertz applies similar reasoning to syphilis and yellow fever. He holds that the Spaniards could not have carried out their conquests if the continent had been as fever-stricken as it is now, and as a matter of fact history tells us little about fever in those days. Malaria was probably brought over from Europe; it now kills over 50 per cent. of all Mexican Indians. America is credited, by way of return, with having given syphilis to Europe.—I am, Sir, yours faithfully,

W. H. S. JONES.

St. Catharine's College, Cambridge.

CHILDREN'S COUNTRY HOLIDAYS FUND.

WITH its recent annual meeting at the Hotel Métropole the Children's Country Holidays Fund completed the first 25 years of its existence. That the number of children sent away year by year has increased from 4000 in 1884 to 42,510 in 1908 is sufficient proof that the work has been carried on with great activity; and the total sent during the 25 years is 600,000. Last year the voluntary subscriptions totalled £19,874. In appealing to the public for further funds to continue

and extend the work Canon S. A. Barnett, the chairman of the Fund, points out that there are 800,000 children in the elementary schools of London, for whose benefit the Fund exists.

That the parents appreciate the efforts made on their behalf is evidenced by the fact that they contributed in small sums no less than £9875 towards the cost, an average of about 4s. 2d. per child, the total expenditure being about £31,000. It would not be possible to send away this number of children were it not for the untiring efforts of the voluntary workers in town and country, who number over 2000. Although the number sent is large, the present yearly total is not 6 per cent. of the elementary school population. Far more ask to go away, but they cannot be sent without a largely increased subscription list and further personal service. We have pleasure in seconding the council's earnest appeal for further help, as the fund is undoubtedly working in the real interest of the public health. Contributions should be sent to the treasurer, the Earl of Arran, 18, Buckingham-street, Strand, London, W.C.

Oyster.—Our correspondent evidently has in mind an article which appeared in THE LANCET of Jan. 3rd, 1903, p. 71, in which we gave an analysis of the oyster and an account of its solubility in various beverages, of which diluted gin appeared to be the most effective, then chablis, whilst in stout the mollusc was practically insoluble.

Sero sed serio.—The story as told is not quite comprehensible. We must be trusted with a full account before we give any definite reply, but there does not seem to be reason for a cessation of the usual professional relations.

Lex.—We consider that the General Medical Council would take action on the information submitted by our correspondent.

ERRATUM.—Mr. H. W. Bayly, in his paper on "The Serum Diagnosis of Syphilis" published in THE LANCET of May 29th (p. 1523), acknowledged his thanks to Mr. W. J. C. Keats for allowing him access to cases. In this acknowledgment Mr. Keats was described inadvertently as medical superintendent of the Hammersmith Infirmary instead of the St. Giles's Infirmary, Camberwell.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 20, Hanover-square, W.

TUESDAY.

SURGICAL SECTION (Hon. Secretaries—Herbert F. Waterhouse, Walter G. Spencer): at 5.30 P.M.

Papers:

Mr. Walter G. Spencer: Benign Tumours—Fibroma, Myoma, Lipoma—Encapsuled in the Wall of the Stomach.

Mr. E. Stanmore Bishop: Some Cases of Gastric Surgery.

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—H. Beckett-Overy, William J. Gow): at 7.45 P.M.

Specimens:

Dr. G. E. Purslow: (1) Uterus, with Fibroid Tumour, from a Case in which Cæsarian Hysterectomy was performed; (2) Bilateral Ovarian Tumours, One of which Obstructed Labour on Two occasions.

Dr. W. J. Gow: Cancer Originating Separately in the Uterine Body and in the Cervix.

Short Communications:

Mr. J. Bland-Sutton: Red Degeneration of a Uterine Fibroid, associated with the Staphylococcus Pyogenes Aureus.

Dr. G. Darwall Smith: An Unusual Solid Tumour of the Ovary.

Dr. Kedernath Das: Fœtal Chondro-dystrophia.

Papers:

Dr. J. S. Fairbairn: Primary Chorion Epithelioma of the Ovary.

Dr. Blair Bell: A Case of Rudimentary Uterus Didelphys, with Ectopia of Each Uterine Body in an Inguinal Hernia Sac; with Some Remarks on the Development of the Female Genital Organs.

N.B.—Fellows of the Society are entitled to attend and to speak at all Meetings.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Millbank, S.W.

WEDNESDAY.—8.30 P.M., Captain E. B. Waggett, R.A.M.C. (T.): The Mouth, Nose, Throat, and Ear from the Point of View of Recruiting.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Card Specimens will be shown by Mr. F. Fergus, Mr. F. W. Edridge-Green, Mr. A. Lawson, Mr. J. H. Fisher, and others. 8.30 P.M., Mr. W. H. H. Jessop: The Report of the International Committee on the Unification of the Notation of Visual Acuity and of the Meridians of Astigmatism.—Mr. P. H. Adams: (1) A Family with Congenital Displacement of Lenses; (2) A Family with Congenital Opacities of Lenses.—Mr. A. H. Griffith and Mr. A. W. Ormond: A Case of Retinal Disease with Massive Exudation and Arterio-venous Communication.—Dr. G. Mackay: An Epithelial Filament in the Anterior Chamber, Simulating a Thread Worm.

FRIDAY.—5 P.M., Special Meeting. Mr. Nettleship: Some Diseases of the Eye illustrating Heredity. (Bowman Lecture).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. G. Little: Clinique (Skin). 5.15 P.M., Lecture:—Dr. W. H. B. Stoddart: The Early Signs of Mental Disorder.

TUESDAY.—4 P.M., Dr. L. Guthrie: Clinique (Medical). 5.15 P.M., Lecture:—Dr. H. Mackenzie: Diagnostic Methods in Tuberculosis.

WEDNESDAY.—4 P.M., Mr. E. L. Evans: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. F. Jaffray: Appendicitis—Symptoms and Diagnosis.

THURSDAY.—4 P.M., Sir Jonathan Hutchinson: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. J. Clarke: The Clinical Examination of Spinal Cases.

FRIDAY.—4 P.M., Dr. D. Grant: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith road, W.

MONDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations.

TUESDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. Etherington-Smith: Clinical.

WEDNESDAY.—10 A.M., Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 12.15 P.M., Lecture:—Dr. G. Smith: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Harman: Diseases of the Eyes. 2.30 P.M., Operations. Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Mr. Pardoe: Retention of Urine.

THURSDAY.—10 A.M., Lecture:—Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Mr. Dunn: Diseases of the Eyes. 2.30 P.M., Operations. 5 P.M., Lecture:—Mr. Keetley: Clinical (with cases).

FRIDAY.—10 A.M., Dr. Moullin: Gynæcological Operations. Lecture:—Medical Registrar: Demonstration of Cases in Wards. 2 P.M. Medical and Surgical Clinics. X Rays. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Operations. Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Diseases.

SATURDAY.—10 A.M., Dr. Davis: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. Mr. Harman: Diseases of the Eyes. 12.15 P.M., Lecture:—Dr. G. Smith: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. 2.30 P.M., Operations. Dr. Robinson: Diseases of Women.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. H. Evans). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson); X Rays. 4.30 P.M., Medical In-patient (Dr. A. J. Whiting).

TUESDAY.—Clinic: 10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations (Mr. Carson). Clinics:—Surgical Out-patient (Mr. W. Edmunds); Gynæcological (Dr. A. E. Giles). 4.30 P.M., Demonstration:—Dr. A. H. Pirie: On the Use of X Rays in Injuries about the Joints.

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. H. W. Carson); X Rays. 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Special Demonstration: Dr. T. R. Whipham: Cases of Children's Disease.

FRIDAY.—10 A.M., Clinic:—Surgical Out-patient (Mr. H. Evans). 2.30 P.M., Operations (Mr. W. Edmunds). Clinics:—Medical Out-patient (Dr. A. G. Auld); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Sir Dyce Duckworth: Medicine. 3.15 P.M., Mr. Turner: Surgery. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 3.15 P.M., Special Lecture:—Mr. Turner:—Accidents complicating Operations.

TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. Carless: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Dr. R. Wells: Failing Heart.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Forms of Paraplegia and their Treatment.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Forms of Paraplegia and their Treatment.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Mr. C. Nourse: Middle Ear Labyrinth.
FRIDAY.—3.45 P.M., Lecture:—Mr. C. Nourse: Middle Ear Labyrinth.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, 73, Welbeck-street, W.

MONDAY.—3 P.M., Clinical Demonstration: Dr. H. Campbell.
TUESDAY.—5 P.M., Clinical Demonstration: Dr. J. Mackenzie.
WEDNESDAY.—3 P.M., Clinical Demonstration: Dr. F. Palmer.
THURSDAY.—3 P.M., Clinical Demonstration: Dr. T. D. Savill.
FRIDAY.—2 P.M., Clinical Demonstration: Dr. P. Stewart. 5.30 P.M., Clinical Demonstration: Dr. E. Macnamara.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.).

TUESDAY (8th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College 2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

WEDNESDAY (9th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan 9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (10th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, (9 A.M., Major, 2 P.M.).

FRIDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.) Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor 9 A.M., Major, 2 P.M.).

SATURDAY (12th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 3rd, 1909.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 28	29·88	WSW	0·17	123	69	49	52	56	Fine
,, 29	29·94	W.	0·08	126	65	51	55	59	Cloudy
,, 30	30·27	W.	...	125	71	50	53	58	Fine
,, 31	30·14	W.	...	129	75	54	54	59	Cloudy
June 1	29·83	E.	...	93	66	58	60	65	Overcast
,, 2	29·90	N.E.	0·38	69	54	51	50	51	Raining
,, 3	30·07	N.E.	0·06	74	55	48	47	51	Cloudy

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THE LANCET

SPECIAL SUPPLEMENT

IN SUPPORT OF THE

METROPOLITAN HOSPITAL SUNDAY FUND

Published in aid of the Appeal to be made on Sunday, June 13th, 1909.

"See the wretch that long has tost
On the thorny bed of pain,
At length regain his vigour lost
And breathe and walk again."—GRAY.

AGAIN we appeal to the benevolent public on behalf of the Metropolitan Hospital Sunday Fund and of those great institutions for the aid of which it was established nearly forty years ago. We address ourselves to those whose forefathers founded the hospitals of London, and bequeathed them to their descendants as an incentive to charity and as an example to the world of what the goodwill of great-hearted men and women can achieve on behalf of their fellows; and we have confidence that the response, as in past years, will be a generous one. The hospitals and their necessities are always with us. The Metropolitan Hospital Sunday Fund is no new institution. Only those who are grey-headed among us can rely upon personal recollection for the story of its inception, and that which, no matter its urgency, is ever before our eyes, or of which we are reminded with regularity at stated periods, is apt to be overlooked in favour of newer or more insistent claimants of our attention. We ourselves are repeating demands and are possibly about to lay stress upon arguments which we have urged before; but we hope that our readers will not forget that the need for their assistance is never less but rather greater as the years move on. The changes that they have recently brought about, and which they continue to bring, if we pause to realize them, make ever for increased efficiency, and call for means to cope with the needs of a larger but not less necessitous population. For more than twenty years the proprietors of THE LANCET have caused this Annual Supplement to be devoted to pleading the cause of the Fund, and ever since its first appearance it has been regarded as a feature of special importance in the annual programme of their paper. No one took a keener interest in it and in the success of the Hospital Sunday Fund than Mr. Thomas Wakley, whose death took place last March, after he had been sole Editor for but two years. Before this he had been joint Editor with his father since 1887, and from that date a special supplement issued, as to-day, on behalf of the Metropolitan Hospital Sunday Fund has been published in our columns.

Mr. Wakley was also a member of the Committee of the Metropolitan Hospital Sunday Fund, as were his father and uncle before him, and like them took a practical and personal part as well as a keen interest in its organization. So that in him the hospitals as well as ourselves have lost during the past year a firm and helpful friend.

Whatever blows, however, time may inflict upon us, and whatever changes we may have to record from year to year when we survey the incidents that the past twelve months have brought about, the continuity of the work of the hospitals around us in the metropolis is never broken, the stream of human suffering flows towards their gates in unabated volume, and the Metropolitan Hospital Sunday Fund has ever to reiterate its claim for that financial help without which good will and good work can effect but little. It appeals to all. Wealthy friends help it each year to maintain its high level of success; but it must be on the countless smaller offerings of the many that in the first place it should rely. The tables which we publish include the names of generous individuals who have given thousands of pounds in single donations, and they are names which should never be forgotten when the hospitals and their supporters are spoken of. It is to others, however, rather than to these that we address ourselves in these pages. They know

the circumstances of the hospitals and the meaning of incessant strain upon narrow means, and their minds will be made up to assist without needing to be stimulated by us. It is therefore more especially to the wider mass of readers that we appeal on "Hospital Sunday." On that day, or on the preceding Saturday if they be of the Hebrew Faith, we urge them to give their alms at whatever place of worship they may attend, and we ask them to do this to the full extent of their ability. We also express the hope that they will not allow any of their friends, who may not intend to be present at a place of worship where a collection is made, either to forget or to ignore the appeal. Every shilling is wanted, and every shilling denied must mean of necessity some corresponding denial of relief to a poor sufferer, although neither he who withholds his gift nor anyone else can ever gauge or define the effect of the omission. It is for the lessening of human suffering that the money contributed is bestowed, and of suffering not limited to the bodily pain felt by the individual who seeks medical or surgical aid at the hospital. He or she in any given instance may be the father or mother, son or daughter, on whom the household depends to earn the wage that keeps the wolf from the door. If he be a child, he will be one who some day will need to win for himself a living which will probably be proportionate to the health and strength which he enjoys, and the money spent on alleviating the bodily ailment of such a child in the present will carry with it the saving of him from more bitter pain in the future. If it helps him to grow up to sound manhood, as well it may do, thereby enabling him to become a healthy and useful citizen, it will prove itself an investment on behalf of the community bringing in profit a hundredfold.

The State and the Health of its Citizens.

This aspect of the provision of medical aid for those who cannot afford to pay for it well merits the consideration of those who are already aware of the benefit which the hospital confers on the individual in alleviating his personal pain and in restoring him to health. It has been brought before us during the past few months by the publication of the Report of the Royal Commission on the Poor Laws and the Relief of Distress, which, while concerning itself mainly with the medical assistance rendered by the community to the individual and paid for out of the rates, has also had to consider the present and future condition of hospital work. The Report contains valuable criticism of the system under which rate-provided and voluntary medical relief are furnished to the necessitous, and in that criticism and in the suggestions made for the co-ordinating and organizing of both the rate-provided and the voluntary schemes the object kept in view is always the advantage to the community of maintaining in health the army of workers of all classes, the prevention rather than the cure of disease, and the bringing into the world and rearing of a race of healthy children. In speaking of the hospitals, the Commission testifies to the great developments which have taken place in them since the early part of the last century, and points out that since then "the growth of operative surgery has increased the demand for hospital treatment, and in spite of frequent extensions of hospitals the demand is still in excess of the accommodation." The history of hospitals in connection with poor-law infirmaries is traced through the time when the poor-law guardians had to send to the hospitals all cases needing special treatment and surgical operations, to the present day, while now the great difficulty the hospitals have to contend with is the elimination of those cases applying for admission to them which would more appropriately be treated in the workhouse infirmary. At present, it must be remembered that the hospitals stand between the sick poor and pauperism—the aid they give is the free gift of the richer to the poorer, and its acceptance brings with it no slur or disability. Increased usefulness and influence is suggested for the hospitals in the future when, if the central recommendation of the Commission is carried out, there will be a "Medical Assistance Committee" in every district, on which the voluntary hospitals will be represented, so that "overlapping" may be avoided, so that the help of the hospitals may be secured to those whose need is sorest, and so that their fullest possible effectiveness may be made certain. Meanwhile, they will continue their work with patience and energy, relieving pain and restoring the toiler to health, conscious that any change of system affecting them will in all probability be long postponed, and also with the knowledge that the work of restoring the poor to health in whatever class of institution it is being carried out is conducted in emulation of their example, under the direction of men trained in their schools.

The supporters also of the Metropolitan Hospital Sunday Fund in the past, as well as those who now first subscribe to it, will be aware that the work of organizing economically medical aid for the poor, the necessity for which the Commission dwells upon with such emphasis, will include the very services which the Fund, as a pioneer, has rendered already so far as its powers have permitted. It has distributed assistance systematically, after acquiring full information with regard to the means and conduct of each institution to which it has allotted the money subscribed by its contributors. It has not only preached economy and careful administration, but has insisted upon them; and those who have brought their offerings to it have had the certainty that they have contributed to a system which has typified method and order in the distribution of charity, promoting the generous relief of suffering without niggardliness, but also without waste.

The Promise of a more effective Ambulance Service.

The Report of the Poor Law Commission does not stand alone, however, as the result of an official inquiry into the needs of the poor in sickness made known during the past year. An investigation directly affecting the hospitals of London, with a view to making their work more effective, was ordered by the Home Secretary at the end of 1906, and was entrusted to a departmental committee composed of three members who were requested to inquire as to the provision made for dealing with cases of accident and sudden illness occurring in streets and public places in the metropolis. They were to express their views as to what improvements in ambulance provision were necessary or desirable, and as to how such improvements could best be brought about with due regard to efficiency and economy. With the details of the Committee's recommendations we are not here concerned, but we may note, as relevant to the case of the hospitals in any appeal for help, that it found itself obliged at an early stage to prosecute its inquiries far beyond

the strict terms of the reference which has been set out above. It soon became obvious that an ambulance service to be effective must bring to the hospitals cases of accidental injury and of illness occurring outside the limits of the County of London, the "Metropolis" proper, and accordingly the requirements of the wider area under the charge of the London Police were considered and discussed. It was urged also on the Committee that cases appealing for means to reach the hospitals quickly and safely were not confined to those accidents and onsets of illness which are constantly occurring in streets and public places. The Committee decided that the service must be at the rapid enough to nullify the inconvenience of a long journey would be quite obviously an immense boon to the sufferers treated, but to provide it is beyond the powers of the hospitals themselves. Its provision would have to include not merely the purchase of vehicles of a costly character, but also the housing and maintaining of them, and of the necessary staff of drivers and attendants, together, possibly, with the institution and upkeep of call boxes, and the making of arrangements for the use of public and private telephones according to need. All this is outside the sphere of the hospitals, which will see with satisfaction the establishment of an Ambulance Service, but will

STATISTICS OF HOSPITAL WORK IN LONDON DURING THE YEAR 1908.

TABLE I.—GENERAL HOSPITALS.*

N.B.—The figures referring to out-patients in these Tables represent the number of VISITS *paid by out-patients—*NOT *the* NUMBER *of out-patients.*

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Charing Cross	1,530	2,178	1,017	967	237	129	178	75,477	10,878
French	399	910	288	532	248	60	30	15,348	2,090
German	709	1,547	408	893	225	121	125	99,878	3,368
Great Northern Central	1,260	2,374	1,859		150	153	213	78,847	11,057
Guy's	1,575	8,565	6,841		840	535	701	446,662	83,638
Hampstead General	377	851	—	—	—	74	62	48,553	680
Italian	225	785	135	620	30	49	19	23,657	226
Kensington General	247	17	—	17	—	—	—	24,365	1,857
King's College	1,800	2,482	739	1,242	245	197	196	46,654	6,495
London	6,300	14,781	5,625	6,292	2,119	799	1,423	607,271	162,346
London Homœopathic	495	1,055	1,001		—	81	54	49,763	2,035
Phillips' Memorial Homœopathic	52	127	37	67	3	12	7	2,403	17
London Temperance	776	1,401	418	674	28	89	120	26,873	19,439
Metropolitan	1,125	—	—	—	—	—	—	—	—
Mildmay	336	585	133	363	101	29	32	37,009	6,159
Miller Hospital and Royal Kent Dispensary	270	353	94	218	7	22	30	74,255	10,277
National Anti-Vivisection	—	197	53	139	6	20	5	23,829	1,451
North-West London	416	—	—	—	—	—	—	—	—
Poplar	546	1,397	—	—	67	81	85	80,568	—
Tottenham, Prince of Wales'	737	1,513	250	902	20	93	199	93,482	—
Royal Free	1,462	2,218	1,928		242	142	148	101,241	24,597
St. George's	562	4,389	2,710		1,300	335	379	113,790	23,759
SS. John and Elizabeth	371	494	452		—	—	36	—	—
St. John's, Lewisham	197	309	61	172	47	28	24	1,395	309
St. Mary's	2,610	4,059	1,294	2,029	397	260	349	133,992	25,627
St. Thomas's	169	—	—	—	—	—	—	—	—
Seamen's Hospital Society	1,665	2,121	989	812	—	257	157	101,805	13,141
The Middlesex Hosp. and Convalescent Home	2,700	5,566	3,075		1,253	367	322	128,615	32,643
University College	2,554	3,754	1,113	1,597	344	261	327	133,269	36,358
Walthamstow, &c.	152	491	52	336	—	33	28	12,541	1,971
Wandsworth, Bolingbroke	326	770	124	517	—	52	77	26,450	5,616
West Ham	602	583	170	288	20	40	63	109,785	12,646
West London	1,277	2,426	2,185		151	148	241	135,959	22,190
Westminster	1,429	2,666	2,241		388	179	246	71,374	9,855
	£35,253	70,964	13,000	18,697	8,468	4,644	5,866	2,925,110	535,723
Estimated to supply omissions	—	7960	10,428	18,531	1,251	606	854	197,424	56,465
Total	£35,253	78,924	23,428	37,228	9,719	5,250	6,720	3,122,534	592,188

* We reproduce the term "General Hospitals" as employed by the Council of the Metropolitan Hospital Sunday Fund.

disposal of those injured or suddenly taken ill in a factory, at a railway station, or in a humble home, and of those lying ill in such places and surroundings as preclude the possibility of proper treatment and nursing. These extensions of scope have introduced difficulties as to the proper authority under which any ambulance service should be placed, but they also made it abundantly manifest that the newly-perfected means of mechanical propulsion must be taken into consideration and that the "rapid ambulance" so desirable in the majority of cases would probably have to be summoned by a well-organized system of telephonic communication. Such a service for bringing accidents and illness to the hospitals speedily and efficiently by means of locomotion see also that it will not lessen the strain upon their resources—it will increase it. Cases which are now not brought to them because the distances to be traversed are too great and the means of transport are insufficient will arrive urgently demanding admission, with the result that the institutions which already have more to do than they can accomplish will be systematically "fed" with patients as if they had "asked for more." In the prospect, therefore, of an Ambulance Service worthy of London and of modern civilisation, we see proof of public esteem for the good work done by the hospitals; the certainty that the suffering of the sick and injured will be lessened; and, at the same time, one more reason why the Metropolitan

Hospital Sunday Fund should retain and secure the hearty support of all.

The Children Act, 1908.

An important statute passed for the protection of children has recently come into force, which, although it cannot be said to affect the Hospitals directly, testifies indirectly to the desire of the nation to safeguard the health of the young and thereby to increase the usefulness of its citizens, and must also tend to increase the demand for hospital accommodation for children. In particular it makes the neglect punishable by law when a parent or other person legally liable to maintain a child shall fail to provide the child with adequate food, clothing, *medical aid* or lodging, or if being unable

TABLE II.—SPECIAL HOSPITALS.

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
City of London for Diseases of Chest	900	1,310	1,098		—	152	60	57,351	—
Hospital for Consumption	3,420	1,367	984		292	315	82	46,059	—
Mount Vernon Consumption	1,530	1,367	—	—	—	216	19	12,960	—
Royal Hospital for Diseases of Chest	613	717	580		24	76	61	25,598	—
Royal National Sanatorium	113	420	416	—	—	—	2	—	—
Royal National Hospital for Consumption	337	831	—	—	—	150	7	—	—
Alexandra Hospital for Hip Disease	433	178	13	53	5	100	7	1,250	—
Banstead Surgical Home	39	36	6	14	—	18	—	—	—
Barnet Home Hospital	62	52	32	10	—	14	—	—	—
Belgrave Hospital for Children	225	—	—	—	—	—	—	—	—
Cheyne for Incurable ,,	146	71	3	11		50	6	—	—
East London Hosp. for ,,	1,007	2,047	404	902	362	110	404	89,690	4,627
Evelina Hosp. for Sick ,,	225	889	703		54	53	189	58,302	—
Home for Incurable ,,	84	59	12	—	—	44	3	—	—
Home for Sick ,,	171	314	—	—	118	44	18	3,860	—
Hospital for Sick ,,	1,097	3,265	1,207	1,276	—	184	409	105,481	—
Kensington Hosp. for ,,	96	167	148		—	11	10	20,482	903
Paddington Green for ,,	337	778	654		197	33	91	53,270	1,515
Queen's Hospital for ,,	1,001	1,734	250	1,052	28	137	334	74,121	12,834
Royal Waterloo Hosp. for Children & Women	203	604	66	288	16	85	76	34,533	—
St. Mary's Hospital ,, ,,	326	645	111	481	—	18	38	18,257	15,473
St. Monica's Hospital ,, ,,	96	131	109		—	20	2	—	—
Victoria Hospital ,, ,,	844	1,069	295	504	515	72	143	68,842	1,271
Victoria Home, Margate	45	122	46	27	—	48	1	—	—
Hospital for Hip Disease	56	62	—	22	2	38	—	—	—
British Lying-in	118	535	533	—	33	24	2	5,184	—
City of London Lying-in	200	802	799	789	10	31	3	29,397	—
Clapham Maternity	45	—	—	—	—	—	—	—	—
East-End Mothers' Home	84	498	490		8	20	—	15,570	—
General Lying-in	101	837	—	832	—		5	21,470	—
Plaistow Maternity	68	110		107	—		1	—	—
Queen Charlotte's Lying-in	579	1,865	1,722		135	—	8	21,690	72
Home for Mothers and Babies	45	152	—	—	—	5	—	1,652	—
Chelsea Hospital for Women	343	754	675		225	46	12	9,912	—
Hospital for Women	501	1,006	343	480	84	55	13	14,715	337
Grosvenor Hosp. for Women and Children	208	415	138	242	—	21	14	15,350	—
New Hospital for Women	399	752	—	—	—	54	—	33,086	—
Samaritan Free	426	773	107	558	150	45	18	15,047	—
Cancer	—	823	713		47	83	114	14,500	—
Middlesex (Cancer Wing)	293	178	—	—	—	47	—	437	—
London Fever	337	712	—	662	60	—	20	—	—
Gordon for Fistula	51	323	10	311	—	14	2	5,412	—
St. Mark's ,,	293	823	39	426	—	29	5	6,033	—
National for Diseases of Heart, &c.	191	173	141		—	25	7	21,804	—
Female Lock	281	379	373	—	3	126	—	—	—
Hospital for Epilepsy, &c.	236	228	210		—	39	4	9,806	—
National for the Paralysed, &c.	1,091	958	520	151	55	156	39	51,233	—
West-End for Nervous System	473	435	309	51	37	67	8	20,964	—
Central London Ophthalmic	197	408	400		1	15	1	28,002	546
Royal Eye	360	598	577		—	21	—	68,890	2,135
Royal London Ophthalmic	1,249	2,351	2,242	—	10	83	6	120,366	2,024
Royal Westminster ,,	186	711	704		6	21	1	36,580	540
Western ,,	118	370	230	140	—	6	—	25,647	—
Royal National Orthopædic	225	537	448		—	87	2	11,367	—
Royal Sea Bathing Hospital	214	476	310	88	—	141	16	3,011	—
St. John's Hospital for Diseases of Skin	56	314	—	—	—	28	—	38,126	—
St. Peter's for Stone	135	509	—	—	—	27	26	39,169	—
Central London Throat and Ear	19	707	685		3	20	19	51,200	—
Hospital for Diseases of Throat	17	793	39	714	9	25	6	48,760	13
London Throat	28	489	483		12	6	1	14,740	—
Royal Ear	52	300	300		—	—	4	10,721	—
Royal Dental	416	—	—	—	—	—	—	57,960	—
National Dental	34	—	—	—	—	—	—	26,342	—
	£23,106	40,009	8,860	10,191	2,510	3,387	2,319	1,564,187	42,290
Estimated to supply omissions	—	799	5,982	8,945	415	185	183	35,542	11,244
Total	£23,106	40,808	14,842	19,136	2,925	3,572	2,502	1,599,729	53,534

otherwise to obtain these things he fails to take steps to procure them under the Acts relating to the relief of the poor. We all know the reluctance of the working classes (and of many who work but little) to have recourse to the guardians, and also the restrictions and conditions which attach to poor-law relief; and it is not difficult to see that if the obligation which existed before to obtain medical attendance for a sick child is now more strictly and more frequently enforced, the tendency will be to bring children more often to the hospital and to endeavour to obtain for them treatment as in-patients or as out-patients when there is any risk that the omission to do so may be visited with penalties. We have no wish to labour our point or to carry our argument further than it will lead us naturally and obviously. We maintain, however, that the direction of modern feeling as evinced in the inquiries of the Poor Law

TABLE III.—COTTAGE HOSPITALS AND CONVALESCENT HOMES.

Name of hospital.	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
	£								
Metropolitan Convalescent (Walton)	478	2,850	1,370	1,231	—	68	8	—	—
,, ,, (Broadstairs) ...	304	1,812	554	1,188	—	59	1	—	—
,, ,, (Bexhill)	574	2,864	407	2,282	—	52	3	—	—
All Saints' ,, (Eastbourne)	450	3,267	881	2,282	—	117	2	—	—
,, ,, (St. Leonards-on-Sea)	28	216	93	119	—	9	—	—	—
Ascot Priory ,, ...	96	234	218	—	—	35	1	190	42
Brentwood ,, ...	11	144	—	—	—	—	—	—	—
Charing Cross Hospital Convalescent	73	511	—	506	—	20	2	—	—
Chelsea Hospital for Women Convalescent ...	51	307	307		—	16	—	—	—
Metropolitan Hospital Home	39	—	—	—	—	—	—	—	—
Deptford Medical Mission Convalescent... ...	20	134	—	—	—	—	—	—	—
Mrs. Gladstone's Convalescent	96	725	—	—		—	—	—	—
Friendly Societies' ,, ...	112	1,214	—	—		12	—	—	—
Hahnemann ,, ...	34	157	132	14	—	30	—	4,892	—
Hanwell ,, ...	14	187	—	—	—	12	1	—	—
Hastings Fairlight ,, ...	32	194	160	—	—	21	1	—	—
Hendon, Ossulston Home	64	—	—	—	—	—	—	—	—
Herbert Convalescent	22	516	278	166	—	48	—	—	—
Herne Bay (Baldwin-Brown) Convalescent ...	67	457	—	—	—	—	—	—	—
Homœopathic Hospital ,, ...	17	212	211	—	—	2	—	—	—
Hemel Hempstead ,, ...	31	445	118	316	—	11	1	—	—
Mrs. Kitto's ,, ...	56	344	343	—	—	—	1	—	—
London Hospital ,, ...	81	183	48	129	—	13	—	—	—
Mary Wardell ,, ...	67	189	—	—	—	—	—	—	—
Police Seaside Home	51	962	—	—	—	18	—	—	—
St. Andrew's (Clewer) Convalescent	112	706	—	—		56	5	—	—
,, (Folkestone) ,, ...	202	2,245	—	—	—	82	—	—	—
St. John's Home for Convalescent Children...	22	310	—	—	—	87	—	—	—
St. Joseph's Convalescent	56	564	394	131	—	33	3	—	—
St. Leonards-on-Sea ,, ...	113	898	—	—	—	44	—	—	—
St. Mary's ,, ...	26	104	—	—	—	7	—	—	—
St. Michael's ,, ...	39	315	—	—	—	—	1	—	—
Seaside ,, ...	169	—	—	—	—	—	—	—	—
Acton Cottage Hospital	91	211	185		—	9	15	11,243	—
Beckenham Cottage Hospital	92	243	31	196	—	12	17	827	100
Blackheath and Charlton Cottage Hospital ...	90	169	16	125	13	12	12	5,498	61
Bromley, Kent ,, ...	137	—	—	—	—	—	—	—	—
Bushey Heath ,, ...	43	169	25	120	3	12	9	42	—
Canning Town ,, ...	84	—	—	—	—	—	—	—	—
Chislehurst, Sidcup, &c., ,, ...	73	—	—	—	—	—	—	—	—
Coldash ,, ...	25	76	23	28	—	20	1	—	—
East Ham ,, ...	81	173	13	139	—	10	10	16,128	—
Eltham ,, ...	70	235	50	148	8	11	19	—	66
Enfield ,, ...	73	287	15	232	—	21	17	—	24
Epsom and Ewell ,, ...	45	124	11	98	14	7	2	—	44
Harrow ,, ...	—	173	29	118	—	11	10	—	18
Hounslow ,, ...	45	159	26	120	—	8	5	2,269	309
Livingstone Dartford ,, ...	108	236	43	171	—	12	10	—	55
Kingston, Victoria Hospital...	87	257	31	187	12	20	12	—	42
Mildmay Cottage Hospital	—	—	—	—	—	—	—	—	—
Reigate and Redhill ,, ...	124	370	35	231	16	26	22	—	60
Sidcup ,, ...	45	151	26	112	3	7	3	219	23
Tilbury (Passmore Edwards) Cottage Hospital	56	135	42	83	—	8	18	1,946	—
Willesden ,, ...	124	289	155	134	—	17	16	253	70
Wimbledon ,, ...	62	208	22	152	—	17	14	60	80
Wimbledon, South, ,, ...	66	237	8	200	—	7	12	118	—
Wood Green ,, ...	66	—	—	—	—	—	—	—	—
Woolwich and Plumstead ,, ...	56	167	30	117	4	9	7	—	167
Hospital for Invalid Gentlewomen	113	178	10	146	—	16	3	—	—
St. Saviour's Hospital and Nursing Home ...	113	140	51	83	—	16	3	—	—
Invalid Asylum	39	222	69	122	7	22	2	—	—
Fir's Home	43	62	28	—	—	19	15	—	—
St. Catherine's Home	23	24	—	—	—	12	3	—	—
Friedenheim Home for the Dying	356	178	27	15	—	39	97	—	—
Free Home for Dying	126	95	24	—	—	17	54	—	—
St. Luke's House	180	129	27	1	1	29	97	—	—
Santa Claus Home	69	64	38	2	2	20	—	—	—
Royal Mineral Water Hospital	56	1,225	1,134	16	—	152	5	—	—
Winifred House...	64	37	18		—	18	—	—	—
Eversfield	—	308	267		—	51	10	1,586	—
Infants' Hospital	113	465	40	213	—	29	80	—	—
All Saints', Highgate	25	141	125	—	—	16	—	—	—
	£6,670	30,603	7,411	11,723	83	1,564	630	45,271	1,161
Estimated to supply omissions	—	3,432	3,378	8,418	—	252	102	10,214	685
Total	£6,670	34,035	10,789	20,141	83	1,816	732	55,485	1,846

Commission and of the Ambulance Committee, and in the Children Act which came into force at the beginning of last April, is towards increasing medical responsibility for the health of what we know as the "masses." In that responsibility the hospitals will have to bear their share, probably rather more than their fair share, and the Metropolitan Hospital Sunday Fund presses its demand that they should be enabled to bear the burden. None will grudge the gift who think of the suffering children of London. In health, their lot is not to be envied. In illness, or when accident befalls them, the hospital opens its doors to them as a haven in which they can find relief, and more than that can forget for a while the crowded street, their playground, and the reeking room, their only home. If all to whom the opportunity occurs to contribute to the Hospital Sunday Fund could only visit one or two hospital wards filled with children for half an hour before the plate or bag came before them, the resources of the Fund would be hugely raised.

TABLE IV.—DISPENSARIES.

Name of dispensary.	Hospital Sunday Fund award.	Out-patients' visits.
Battersea Provident	£214	63,000
Billingsgate	118	14,390
Blackfriars Provident	23	7,503
Bloomsbury ,,	17	6,235
Brixton, &c.	56	23,697
Brompton Provident	19	4,304
Buxton Street	28	—
Camberwell Provident	90	92,703
Camden Town ,,	17	7,540
Chelsea, Brompton, and Belgrave	51	6,562
Chelsea Provident	11	3,336
Child's Hill ,,	17	6,185
City	56	21,831
Clapham General and Provident	28	10,852
Deptford Medical Mission	28	11,517
Eastern	43	31,365
East Dulwich Provident	54	23,397
Farringdon General	45	8,083
Finsbury	63	34,197
Forest Hill Provident	43	23,009
Greenwich ,,	39	23,742
Hackney ,,	20	1,600
Hampstead ,,	70	—
Holloway and North Islington	23	2,568
Islington	69	56,091
Islington Medical Mission	49	—
Kennington and Vauxhall Provident	16	5,338
Kensal Town Provident	17	5,310
Kentish Town Medical Mission	24	3,061
Kilburn, Maida Vale, and St. John's Wood	45	7,932
Kilburn Provident Medical Institution	58	20,570
London	18	—
London Medical Mission	153	17,933
Margaret-street, for Consumption	35	7,894
Metropolitan	74	30,660
Mildmay Medical Mission	23	—
Notting Hill Provident	11	7,572
Paddington ,,	39	8,383
Public	34	8,107
Queen Adelaide's	30	17,980
Royal General	30	13,058
Royal Pimlico Provident	54	24,945
Royal South London	52	10,224
St. George's, Hanover-square	30	3,994
St. John's Wood Provident	57	18,564
St. Marylebone General	61	9,339
St. Pancras and Northern	36	8,145
St. Pancras Medical Mission	25	—
South Lambeth, Stockwell, & North Brixton	44	7,908
Stamford Hill, Stoke Newington	63	34,601
Tower Hamlets	56	10,917
Walworth Provident	18	9,523
Wandsworth Common Provident	17	6,191
Westbourne Provident	22	9,962
Western	76	24,015
Western General	114	20,374
West Ham Provident	15	1,375
Westminster General	52	22,711
Whitechapel Provident	38	25,457
Woolwich ,,	38	—
	£2,766	885,750
Estimated to supply omissions	—	91,054
Total	£2,766	976,804

Another reason for a Liberal Contribution.

Yet another reason may be added for the need for special effort in 1909 in order to keep the annual collection of the Metropolian Hospital Sunday Fund at its usual high level. We are at peace with the world. It is now several years since the country had to bear the stress of the South African war and its accompanying expenditure of the national resources. Nevertheless, the recent years of peace which we have enjoyed have not been markedly years of prosperity or of "good trade." Liabilities affecting the nation must be met by those having charge of its finances, and methods of taxation necessary in the eyes of a Chancellor of the Exchequer do not always secure the cheerful acquiescence of those upon whom the burden is cast. It is often threatened by those who consider that they have been hardly treated by the imposition of fresh or increased taxes that their economies occasioned thereby must take in the first place the shape of diminished contributions to charity. We hope that as a matter of fact so ignoble a threat is but rarely carried out, and that such diminution of almsgiving does not take place save only when necessity absolutely compels it. We hope also that in all such cases gifts to the hospitals of London are the last to be withdrawn. Sometimes, however, charitable gifts must cease to flow from their accustomed sources for various reasons, and then the charity must put up with the loss unless others will come forward and make it good. We call upon all, therefore, in the current year to see that neither bad trade nor the course of taxation shall affect to its loss the Metropolitan Hospital Sunday Fund. Whatever the condition of England's commerce may be, the hospitals of London must carry on their business unflinchingly. Their commerce is one that brings them no profit in a financial sense, but they appeal to all to prevent them from carrying it on at a loss. They endeavour to frame their estimates for the financial year with

TABLE V.—NURSING ASSOCIATIONS.

Name of association.	Hospital Sunday Fund award.	Visits.
Belvedere and Abbey Wood	£ 9	3,469
Brixton	27	—
Central St. Pancras	20	10,858
Chelsea and Pimlico	27	17,220
Hackney	34	25,142
Hammersmith	55	30,531
Hampstead	21	—
Isleworth	14	5,308
Kensington	61	29,116
Kilburn	9	—
Kingston	34	17,026
Metropolitan (Bloomsbury)	68	28,544
St. Olave's (Bermondsey)	48	26,212
Paddington and Marylebone	48	23,914
Plaistow	68	19,790
Plaistow (Maternity)	150	—
Rotherhithe	14	4,429
Shoreditch	89	41,631
Silvertown	13	—
South London (Battersea)	61	44,933
Tottenham	7	—
Southwark	41	21,220
South Wimbledon	21	—
Westminster	27	17,667
Woolwich	30	17,010
East London	178	82,774
North London	75	33,257
London District	492	244,677
Peckham	9	5,162
	£1,750	747,890
Estimated to supply omissions	—	165,026
Total	£1,750	912,916

all the care and skill that they can command. Experience has taught them to be prudent; it has also taught them not to be over sanguine. They practise every economy that is consistent with the efficient discharge of their duty. If they suffer loss of income, if at the end of their financial year the balance is against them, it is because their revenue has fallen short of their expectations, and perhaps because some of those to whom they have looked for support have failed them. Such failure will be due, no doubt, to necessity and not to any lack of good will; but it has as its result a deficit instead of the modest degree of solvency for which they hoped. They impose no tax except that which the generosity of their friends will enforce. They levy no duty upon which they can insist. They can only appeal to all who "have" to assist in the name of charity in allaying the sufferings of those who "have not." From those who have health they crave aid on behalf of those whose health has failed, and who have been rendered helpless thereby; who have been struck down by physical injury or disease against which they have made no provision while in health. They ask it of those who have wealth, and of those who have that sufficiency which is wealth compared with the slender resources of their humbler brethren, whom sickness or accident must of necessity overwhelm unless help is at hand. Prudence there may be on the part of the labourer and artisan, which will help to keep his family from want while he is in the hospital. Many a man, and very properly, makes an inroad upon his savings with this object in view, but let us remember that for many hundreds of thousands of our countrymen it is not possible to make such provision for contingencies as will safeguard them when serious illness or accident befalls. They belong to the class whose occupation renders them liable to accidental injury in a degree which their neighbours in other walks of life may scarcely realise. They live in homes and under conditions which in the public interest as well as in theirs we hope to see ameliorated; but at present, at all events, they so live that disease is likely to find in them but little resistance to its attack; and the remedies which science places in the hands of the community for serious physical conditions are of a costly nature, including suitable lodging and food, highly trained nursing, surgical and medical aid, costly drugs, and costly apparatus. No economies that even the better situated of the working classes are able to make, can enable them to meet such a demand upon their resources, and if in the hospitals they accept charity no blame can attach to them in their misfortunes. But if times become better let them remember to contribute their mite. Others who come to the hospitals are lower in the economic scale: men and women whose labour is fortuitous, and who in casual work, often of the roughest kind, are even more liable to injury and disease than the artisan or labourer in regular employment. It is for such as these, too, that the generosity of the public is craved on Hospital Sunday. The alms of the charitable, which given promiscuously may mean the provision of a few meals or the tiding over of a temporary crisis of a life of chronic mendicancy, have a different signification when they contribute to the building up of health of those who thus will at least have the chance of

TABLE SHOWING THE RESULTS OF COLLECTIONS SINCE THE COMMENCEMENT OF THE FUND.

Year.	Totals.	Donations.	Year.	Totals.	Donations.
1873	£27,700	£1844	1891	£45,330	£9019
1874	29,936	1505	1892	41,512	4429
1875	26,396	1424	1893	39,290	3652
1876	27,042	1339	1894	43,679	7717
1877	26,082	947	1895	60,361	21,990
1878	24,904	1199	1896	46,035	5533
1879	26,501	1120	1897	41,003	3607
1880	30,423	1567	1898	40,397	3864
1881	31,856	1638	1899	53,504	15,310
1882	34,146	2106	1900	51,993	16,137
1883	33,935	1980	1901	54,731	18,343
1884	39,329	6410	1902	62,669	16,307
1885	34,330	2555	1903	64,975	15,766
1886	40,399	4817	1904	63,054	15,143
1887	40,607	4130	1905	78,379	29,425
1888	40,379	3080	1906	63,075	18,441
1889	41,744	3482	1907	78,651	35,865
1890	42,814	3991	1908	80,181	39,941

1884. Including £4500 from the International Health Exhibition.

1885, 1886, 1887. Including three donations of £1000 each from Dr. James Wakley, Editor of THE LANCET.

1891. Including £5000 from the late Duke of Cleveland, &c.

1894. Including a legacy of £5000 (less duty) from the executors of the late Mr. W. J. Whitaker.

1895. Including £10,000 from Messrs. Barnato and friends; £3400 from the Stock Exchange; £1000 from Lord Iveagh; and £1000 from Mr. J. B. Robinson.

From 1891 to 1896 Sir Saville Crossley, Bart., P.C., M.P., gave an annual donation of £1000, and since has divided his contribution between this Fund and King Edward's Fund.

1897. Jubilee year. H.R.H. the Prince of Wales started a Special Fund for Hospitals.

1899. Including £10,000 from Mr. George Herring, and £1050 from Mr. J. Lane Densham.

1900. Including a further £10,000 from Mr. George Herring, £1090 from Mr. Thos. King, and "F. H." £1000.

1901. Including a further £10,000 from Mr. George Herring, and £4000 from Sir F. Cook, Bart., M.P.

1902. Including a further £11,575 from Mr. George Herring, and £1000 from Mr. Charles Morrison.

1903. Their Majesties the King and Queen, with most of the other Members of the Royal Family, attended at St. Paul's Cathedral. Including a further £12,302 from Mr. George Herring.

1904. Including a further £11,926 from Mr. George Herring.

1905. Including a further £12,400 from Mr. George Herring, and £12,500 from the executors of Mr. F. W. Cook.

1906. Including a further £11,000 from Mr. George Herring and £3000 on account of the legacy bequeathed by Mr. Herbert Lloyd.

1907. Including £30,000 from the late Mr. George Herring's estate, and a second instalment of £3000 on account of the bequest of the late Mr. Herbert Lloyd.

1908. Including £35,000 from the late Mr. George Herring's estate, and an instalment of £2000 on account of the bequest of the late Mr. Herbert Lloyd.

SUMMARY OF TABLES.

—	Hospital Sunday Fund award.	In-patients.	Relieved.	Cured.	Convalescent homes.	Remaining under treatment.	Died.	Out-patients' visits.	Accidents and emergencies
General Hospitals	£35,253	78,924	23,428	37,228	9,719	5,250	6,720	3,122,534	592,188
Special Hospitals	23,106	40,808	14,842	19,136	2,925	3,572	2,502	1,599,729	53,534
Cottage Hospitals and Convalescent Homes	6,670	34,035	10,789	20,141	83	1,316	732	55,485	1,846
Dispensaries	2,766	—	—	—	—	—	—	976,804	—
Nursing Associations	1,750	—	—	—	—	—	—	912,916	—
Total	£69,545	153,767	49,059	76,505	12,727	10,638	9,954	6,667,468	647,568

helping themselves. Such gifts as these are surely worth a little self-denial, the loss of a transitory pleasure, or the abnegation of a luxury which once enjoyed will leave nothing behind worth possessing. The present season may be one at which the prospect of financial burdens presses heavily upon some who in the past have been able to treat them more lightly; but we urge upon all that it would be unworthy of them to allow the hospitals and the poor whom they relieve to suffer thereby. The reward of satisfaction in a good deed done without ostentation will be to those who give freely.

All can and should give.

The Metropolitan Hospital Sunday Fund is not only an organization for collecting the alms of the wealthy and well-to-do, who in places of worship in prosperous neighbourhoods have helped it before, and will, we feel confident, aid it again most generously: it is also essentially the opportunity for all to give in proportion to their means. There is a time honoured and possibly trite expression, which has been used sometimes in jest and sometimes in earnest until its origin and its inventor have alike been forgotton, if any one person can ever have originated it. A hackneyed phrase, however, may sometimes be justly and seriously applied, and if we now say with regard to the Metropolitan Hospital Sunday Fund "All contributions thankfully received," we do so with every hope that those who read will realise that it is addressed in all earnestness to themselves and to their neighbours without exception. The Fund welcomes the gifts of all, and distributes them justly and evenly so that they take their part in sustaining those great healing institutions which have set an example to the whole of the charitable world. There must be very few who attend religious worship on Hospital Sunday so poor that they cannot give their mite, perhaps in gratitude for that which the hospitals have done for themselves or for their friends or relatives. There can be few children who cannot bring contributions which will show that they too have learnt something of the duty of self-denial and of thought for others. We have said above that all should remember to give themselves, and to remind others, so that none may be able to plead ignorance or forgetfulness. We refer not only to those Londoners who on Hospital Sunday may not attend at any place of worship because they seek recreation or for other causes. London at this season is filled to overflowing with strangers to whom it extends a ready welcome; some are from foreign countries, and others from various parts of the British islands or from distant portions of the Empire. Some are here for business, others for pleasure; but whether they are here to make money or to spend it on their own enjoyment, they should be reminded of the hospitals of the metropolis whose doors stand open to all who need their aid, and who bestow that aid without taking account of birthplace or of "settlement," of nationality or of creed. They should not be allowed to forget that if the qualification for admission to the hospitals of London is that of physical suffering which the hospital can allay, combined with poverty, there is one cause and one only which may bring about the denial of help to those whose claim for assistance is beyond question. That cause is in three simple words: "want of money." Insolvency almost every hospital risks each year, relying upon the repetition of those kindly gifts which have helped it in the past, but beyond a certain point a hospital cannot go, and the work has to be sadly curtailed and kept within limits which can only be made wider by the generosity of the public.

To that public appeal is made once more in 1909 on behalf of the Metropolitan Hospital Sunday Fund.

THE METROPOLITAN HOSPITAL SUNDAY FUND.

Receipts and payments for the year ending 31st October, 1908.

Dr.

1908.	£ s. d.	£ s. d.
To Balance at Bank of England, 1st Nov., 1907	4,079 5 3	
,, Balance, Petty Cash	8 19 2	
		4,088 4 5
,, Collections made at Sundry Places of Worship	40,213 15 7	
,, Collections at Schools	26 0 5	
,, Donations	1,003 19 8	
,, Dividend on £224 15s. 2d. Consols	5 7 0	
,, Interest on Balance of Legacy from the late Herbert Lloyd (less Tax)	136 6 7	
,, Dividend on £45,346 1s. 3d. Consols, per Executors of W. A. Guesdon, deceased	1,133 13 0	
,, George Herring's Estate— On account of Interest	35,000 0 0	
,, William Vokins' Bequest— Dividend on £22,590 16s. 3d. Consols	536 10 8	
,, Interest on Deposit	90 11 5	
,, Legacies— Herbert Lloyd, third instalment of legacy of £10,000	2,000 0 0	
,, Income Tax returned	35 11 5	
		80,181 15 9
		£84,270 0 2

Cr.

1908.	£ s. d.	£ s. d.
By Awards to 150 Hospitals	63,584 5 7	
,, Awards to 13 Institutions	1,317 7 6	
,, Awards to 60 Dispensaries	2,764 0 11	
,, Awards to 29 Nursing Associations... ...	1,750 0 0	
,, Surgical Appliances	4,071 5 1	
		73,486 19 1
,, Rent	275 0 0	
,, Insurance	1 3 8	
,, Furniture and Repairs...	4 11 5	
,, Fuel, Lighting, and Office Cleaning ...	39 8 6	
,, Printing and Stationery	183 18 3	
,, Postages	213 10 4	
,, Telephone	16 7 7	
,, Advertisements	316 10 10	
,, Salaries and Gratuities	1,342 19 6	
,, Pensions	362 10 0	
,, Special Appeal...	725 11 11	
,, Sundries	15 1 4	
,, Law Charges	700 0 0	
		4,196 13 4
,, Balance at Bank of England, 31st Oct., 1908	1,557 13 0	
,, ,, on Deposit...	5,000 0 0	
,, ,, Petty Cash	28 14 9	
		6,586 7 9
		£84,270 0 2

Audited and found correct, this 26th day of November, 1908.

(Signed) W. H. PANNELL & Co., *Chartered Accountants*, 13, Basinghall-street, E.C.

*** *In the preparation of the voluminous statistics of hospital work which have been here digested and exhibited in collected form (and which have been specially supplied to us in response to our applications, and are quite independent of any returns made to the Metropolitan Hospital Sunday Fund Committee), we have been greatly indebted to a large number of secretaries and other officers of the various medical charities of the metropolis. To them we desire, as on many previous occasions, to tender our sincere thanks.*—ED. L.

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